

American Artisan and Hardware Record

Sheet Metal - Roofing - Warm Air Furnaces - Stoves

Vol. 92, No. 14

CHICAGO, OCTOBER 2, 1926

\$2.00 Per Year

Success Heaters

constantly win prospects over to
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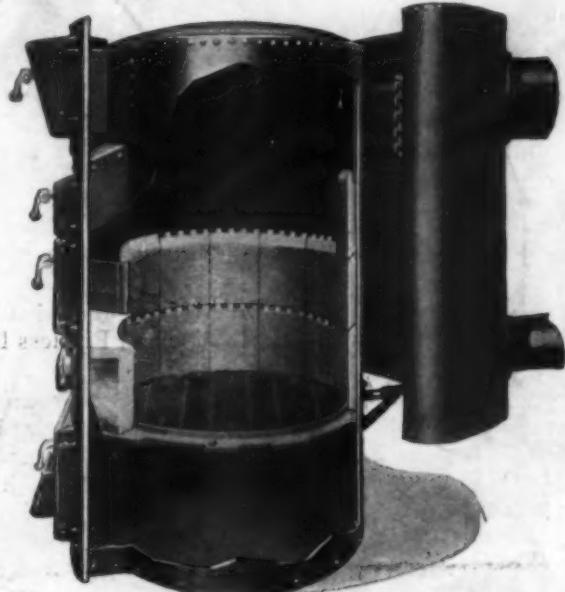
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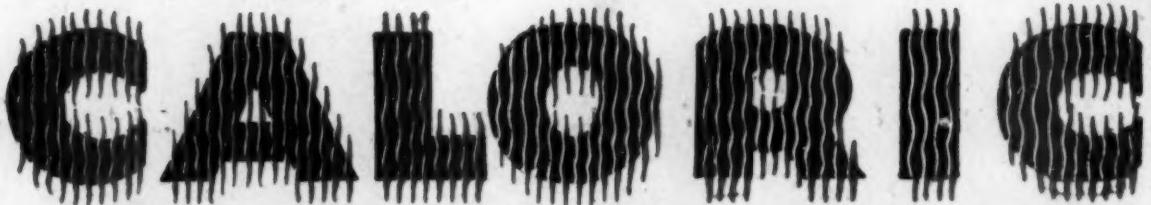
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AMERICAN ARTISAN

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October 2, 1926

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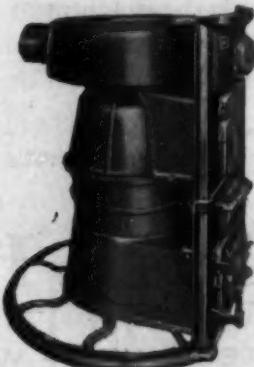
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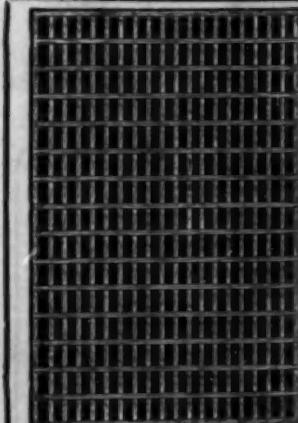
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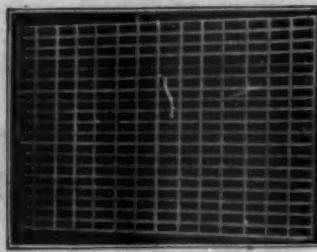
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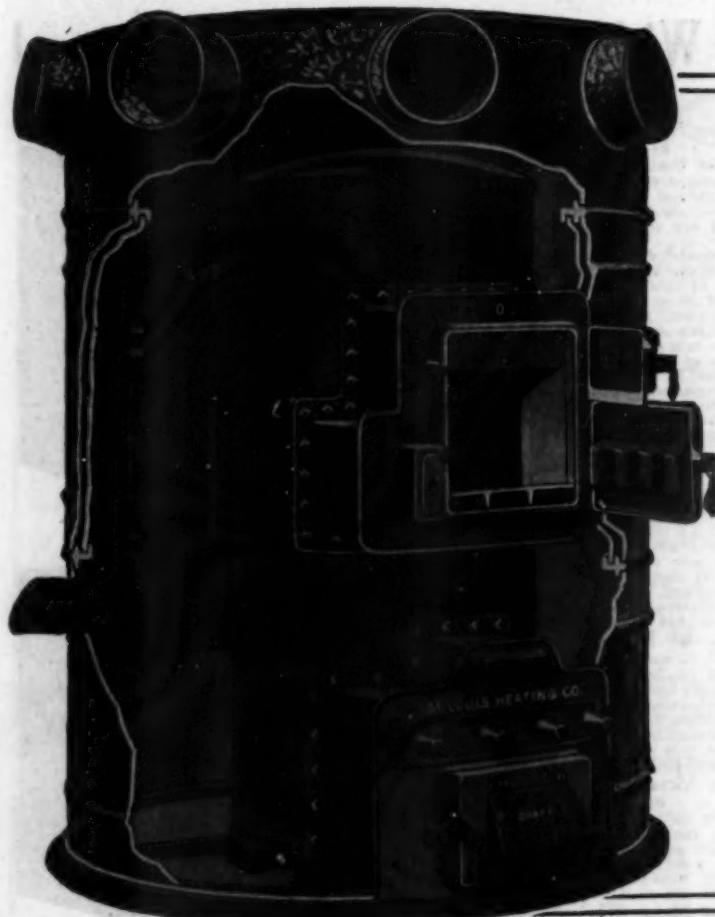
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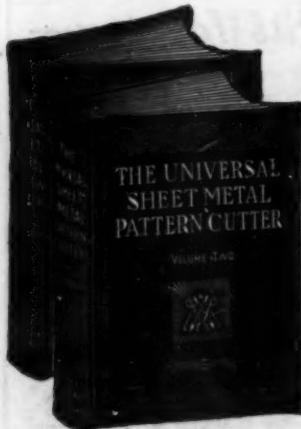
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The Ventilation Handbook

By Charles L. Hubbard

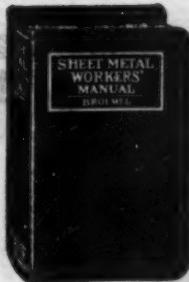
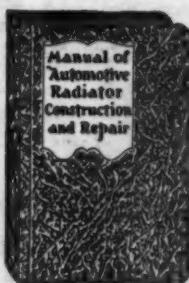
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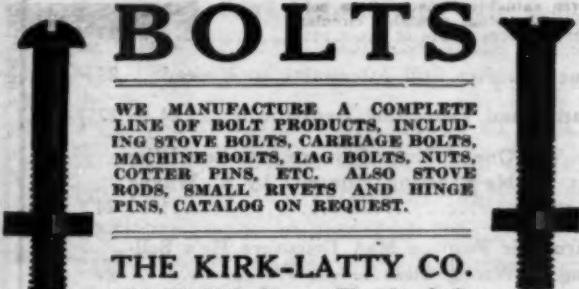


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Founded 1880

American Artisan

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Price:

United States . \$2.00

Canada \$3.00

Foreign \$4.00

Published EVERY SATURDAY at 620 South Michigan Avenue, Chicago

ADVERTISING AND EDITORIAL STAFF:

Etta Cohn
J. F. JohnsonG. J. Duerr
Frank McElwain

Eastern Representative: W. C. White, 1478 Broadway, New York City

Vol. 92, No. 14.

CHICAGO, OCTOBER 2, 1926.

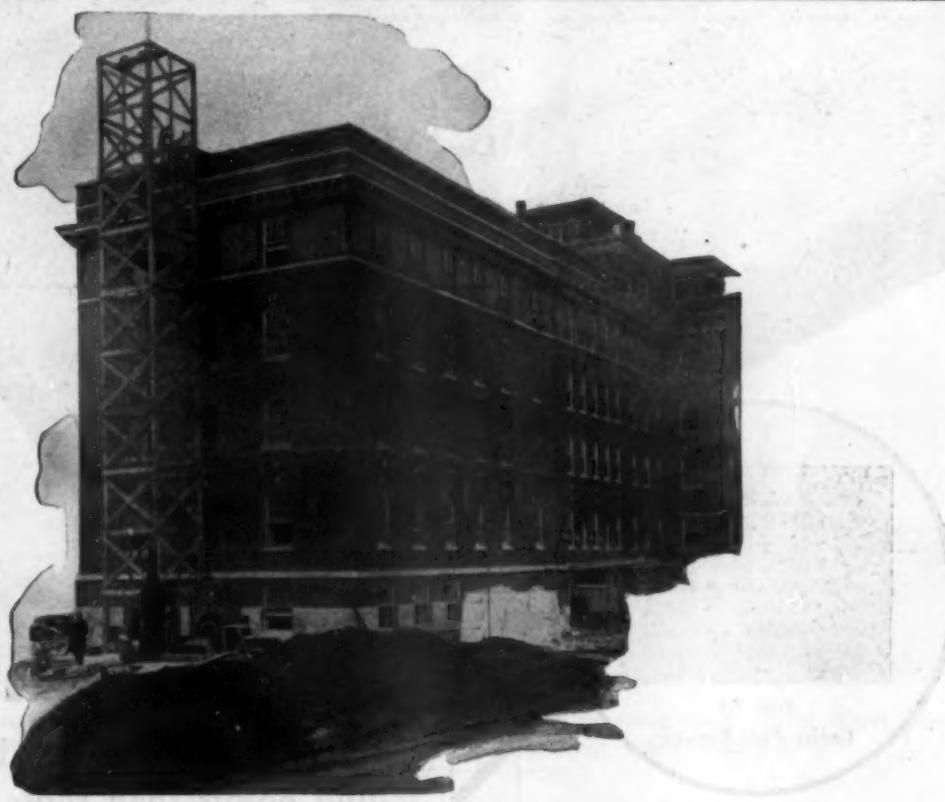
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AN ACHIEVEMENT

An explanatory note regarding service to readers of AMERICAN ARTISAN. This paper is now nearing the completion of a half century of service. For almost fifty years it has catered to the needs of the men in the industries which it represents. At no time during its long and successful career has AMERICAN ARTISAN been in a better position to render complete, adequate service to its readers than it is today. In addition to the matter contained in our regular weekly publication, we maintain Service Departments for the use of our readers. If you have a problem to solve, we courteously invite you to submit it to us for solution. In what better way can we learn of your problems than from you direct?



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For instance, one contractor in Wichita, Kansas, put a Sheet Steel cornice on the Wesley Hospital. That was back in 1918. When the hospital officials erected their new edition in 1926, they again selected a Sheet Steel cornice and awarded the job to the same contractor.

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The Sheet Steel Trade Extension Campaign is designed to help you get the repeat jobs—and profits—Sheet Steel brings. For complete information write, the SHEET STEEL TRADE EXTENSION COMMITTEE, OLIVER BUILDING, PITTSBURGH, PA.

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American Artisan and Hardware Record



Vol. 92.

CHICAGO, OCTOBER 2, 1926

No. 14.



Modern Bungalow Under Construction at New Braunfels, Texas, Equipped with Standing Seam Sheet Metal Roof. Nowhere on Building Is Sheet Metal Contractor's Name Visible, Although Painter and General Material Dealer Have Their Signs in Evidence

It's Those Little Extra Efforts That Often Turn Pending Failures Into Success

Many Sheet Metal Contractors Do Not Take Advantage of Chances to Advertise

ARE sheet metal contractors advertising themselves properly? Some are, no doubt, but on the other hand instances are constantly coming to our attention where the contractor has overlooked or totally ignored excellent opportunities to bring his materials and services to the attention of the public whom he hopes to serve.

An example of this neglect is had in the accompanying illustration. The bungalow here pictured is located in New Braunfels, Texas, the city reported as having the largest percentage of sheet metal roofs of any city in the United States. This city because of its use of the sheet metal roof has reduced its fire insurance premiums enormously over a period of thirty years.

Perhaps in this instance, where the sheet metal roof is the rule instead of the exception, the contrac-

tor was justified in not calling attention to the fact that a sheet steel, sheet copper or a sheet zinc roof, as the case may be, was placed upon this attractive stone bungalow.

The contractor who furnished the stone for the building and the painter who decorated its interior have small signs on the exterior acquainting the public with the fact that they have worked on the building.

On the contrary there is nowhere visible on this building a similar sign acquainting the public with the fact that the John Doe Sheet Metal Works put this attractive sheet metal roof on the dwelling. Here's a case of something to crow about and no crowing done!

If the painter and the carpenter thought it profitable to place their "shingles" on the building, why not the sheet metal contractor?

Did you ever have the privilege

of accompanying a real live sheet metal contractor or warm air furnace installer through a day of activities? If so, you know that the contractor who is "getting on" never neglects an opportunity to advertise himself and his business. If he has secured a contract to roof a house that is being built, his shingle is to be found hanging somewhere on that building. If he secures a contract to remove an old roof and to replace it with one of sheet metal, he obtains permission from the owner to put a sign on the house while the work is going on. And he seldom fails, because he takes the trouble to go about getting that permission in the proper manner.

The sheet metal contractor, as a rule, is not by nature an advertiser. He is constantly hiding his light under a bushel. He does not take advantage of the existing adjuncts to

tractors in other lines of business do. Consequently, when he comes into competition with these other lines of business in his daily work, he loses out in a great many instances, although he has a superior product.

Here's case in point: On the southeast corner of Van Buren Street and Wabash Avenue, Chi-

the plate glass men had completed their work, the foreman of the gang plastered a sign on the plate glass, informing the public who the contractor was that put in this plate glass. The electrician who did the wiring also lost no time in getting his name before the public in the same manner as did the plate glass man.



Court House in Augsburg Erected in 1860 and Covered with the Sheet Copper Roof, Showing That Copper Roofing Properly Put on Can Withstand the Ravages of Centuries

cago, a whilom cigar store is being remodelled for a Walgreen drug store. A Chicago sheet metal contractor has the job of changing the upper front of the building so as to conform to the needs of large plate glass windows that were to be inserted. A great quantity of sheet metal is being used in the process.

While this contractor was at his work, the plate glass installers were also busy with their work. Now here's the difference in the methods of the two contractors. As soon as

The sheet metal contractor on the contrary, although there was ample space for a similar sign on the scaffolding upon which he worked, gave no evidence of who or what he was or did.

At this particular corner there are hundreds upon hundreds of people from all walks of life passing at all hours of the day.

This instance shows the distinction. The one contractor was an advertiser and took advantage of every opportunity to get his name

and products before the public, while the other was not an advertiser. In this instance the sheet metal contractor did not make the extra effort, although it would cost him next to nothing to do so.

There are many products that are overadvertised, but sheet metal is not included in that group.

Metal Branch

Meeting, Atlantic City,

October 21

The fall meeting of the Metal Branch of the National Hardware Association will be held at the Ambassador Hotel, Atlantic City, on Thursday afternoon, October 21, 1926.

The preliminary draft of the program includes opening remarks by Chairman W. H. Donlevy, followed by an address, "Tendency in Steel," by A. I. Findley, editor of *The Iron Age*.

There will be a discussion on sheet metal market conditions, on the new sheet steel base and differentials; on the policy of stamping terne plate with the weight of coating, with particular reference to its effect on the industry; on the competitive conditions in the distribution of sheet metals, and the relative cost of distributing today as compared with the period under supervision of the War Industries Board.

Walter C. Carroll, chairman of the Sheet Steel Simplification Board of Review, is to report on progress and the present status of simplification of sheets; L. D. Bruckel, chairman, is to give a similar report for the Terne Plate Simplification Board of Review, and R. L. McHale, chairman, is to report for the Eaves Trough and Conductor Pipe Board of Review. E. H. Hoffeld is down for remarks on the elbow situation.

Another item on the program is an outline of the present work and future plans of the Sheet Steel Trade Extension Committee.

Those attending the convention are asked to procure railway certificates so that when a sufficient number have been validated at Atlantic City the return trip ticket may be purchased at half fare.

Buffalo "Silo" Proves to Be an Astronomical Laboratory

Dome of Observatory Covered With 24-Gauge Sheet Metal

By H. F. COPE

AN ODD-LOOKING building resembling a silo was recently erected in Buffalo on top of a garage. Inquiry proved it to be a private astronomical observatory belonging to Dr. Charles W. Bullock, 23 Winston Road, Buffalo, an analytical chemist. Dr. Bullock was more interested in the stars than in automobiles. So he converted his garage into a study and outfitted it with magnifying equipment of the most modern and powerful type.

The observatory was built with a sheet metal dome for the telescope much like the large official observatories. The dome is of a very unusual design. But it was not too much for the sheet metal contractor, George H. Berkhausen. He built it of pure iron furnished by Ajax Metals, Buffalo.

The building was designed and built under the instructions of Dr. Bullock by Clarence Patterson, contractor. The "silo" mounts thirty feet in the air above the roof of the garage. This height permits focusing the telescope down to the horizon. The building is round and has a cone-shaped top. The interior diameter of the building is twelve feet.

The telescope, known as an equatorial telescope, was designed and mounted by the Bausch and Lomb Company, Rochester, New York. It is equipped with a clock-work that automatically keeps it focused on any desired star or planet, offsetting the motion of the earth. It is so strong that it brings very distant stars into clear view. This instrument is mounted on a concrete base that reaches down to hardpan clay, thus making certain that it will be free from all disturbing vibrations.

Dr. Bullock also has in the garage a projection microscope which is so powerful that it will magnify an object 12,000,000 times. It will mag-

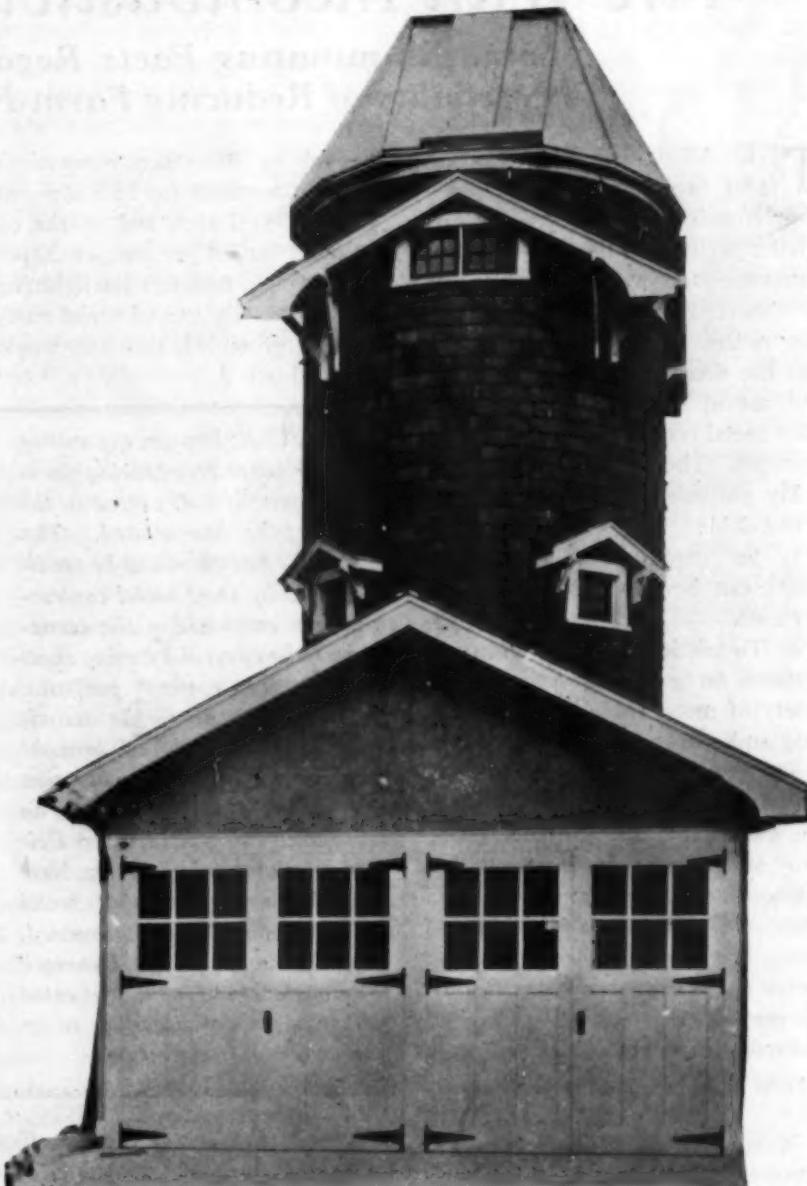
nify a fly's wing so that it appears eighteen feet long, and a fly's eye so that it appears six feet in diameter.

Dr. Bullock finds a great deal of

stars with their spectacular coloring as seen through a powerful telescope are among the most beautiful sights that can be seen.

Group Insurance Is Illegal, Rules Wisconsin Insurance Commissioner

Wisconsin insurance laws prevent the writing of group insurance with the premium fixed on the basis of an average age, Insurance Com-



Astronomical Observatory of Dr. Charles W. Bullock, Buffalo, New York. The Sheet Metal Contractor, George H. Berkhausen, Used 24-Gauge Armco Ingot Iron for All Sheet Metal Work

pleasure in studying astronomy as a hobby. He is a graduate in chemistry from the University of Buffalo and now conducts an analytical laboratory there. He says that the

missioner Olaf Johnson, Madison, Wisconsin, declared. The commissioner also ruled a difference in the promotion of greater business in the same energetic manner that con-

amounts to be paid under a group policy, as one sum to the employees of a corporation and another to its officers, would be discriminatory and therefore illegal.

"I hold," the commissioner said, "that it is illegal for any firm or

employer to take a group of persons, for instance, from 21 to 60 years of age, insure them, charging a premium based upon average of their ages.

"Another question asked me was whether, under such a group plan,

the firm could issue policies for \$3,000 to its employees and as high as \$10,000 to its officers without encountering difficulty.

"I replied that this would be discrimination and would not in any sense be legal."

Only Way to Fight Fire Is to Prevent Fire With Incombustible Materials

Some Illuminating Facts Regarding the Possibility of Reducing Farm Fire Losses

THE ARTICLE on reducing farm fire losses given herein-after contains the salient points of a letter written to the editor of an insurance paper by C. E. Drayer, of the Sheet Steel Trade Extension Committee. It contains many facts that the sheet metal contractor will find useful in promoting sales of sheet metal roofing in farming communities. The letter follows:

My purpose in writing this letter is two-fold:

1. To suggest how farm fire losses can be reduced at least 20 per cent.

2. To ask for assistance and suggestions on gathering data on the safety of metal roofs against lightning and sparks.

The importance of the subject warrants a long letter. Not only do the owner and the insurance company suffer from fire loss, but the public is an equal, if an indirect, loser. Insurance is a social question. The Chicago *Journal of Commerce* states that an indirect tax of \$5 per capita is levied by fire on commodities.

How to Reduce Farm Fire Losses 20 Per Cent

Most literature and talks on fire prevention emphasize carefulness and carelessness. This is fine; but how is a farmer to be either careful or careless in his attitude toward lightning? Apparently there is but one way to handle lightning and that is to furnish an easy way for it to get to the earth.

According to "Insurance Facts for the Farmer" (published and dis-

tributed by insurance companies) lightning accounts for 13.5 per cent of farm fire losses, and sparks on the roofs for 6.3 per cent, or 20 per cent in round numbers for lightning and sparks. By use of metal roofs properly grounded, this loss would be wiped out.

Mr. C. E. Drayer, the author of the letter on reducing farm fire losses, is well versed in the subject he has treated. The facts he has given can be readily used by sheet metal contractors in emphasizing the economy to be effected by using sheet metal for roofing purposes. These facts should be assimilated, memorized and brought to the fore whenever occasion presents itself. No less an authority than Professor Pippin, Columbia University, New York city, stated that metal roofing, properly grounded, placed on the Lake Denmark arsenal would have prevented that tremendous sacrifice to ignorance and carelessness.

The manager of the western office of one of the large companies that write fire insurance said to me recently that farm fire losses were probably nearer \$200,000,000 last year than \$150,000,000, if the information were complete.

What was more to the point, he said the loss to the insurance companies from farm fires was continuing and might amount this year to

\$1.15 (as I recall) for each \$1 taken in by the companies.

Down in New Braunfels, Texas, they reduced insurance rates over a period of twenty years from 64 cents per hundred to 15 cents, or 78.1 per cent (see *American City Magazine* for September, page 374).

If New Braunfels could reduce rates 78.1 per cent, her methods are obviously of interest, and the editorial in *Farm and Ranch* seems on sound ground when the editor stated:

"Most fires are preventable, and if farmers would exercise care and reduce the losses 50 per cent or more, as is possible, premiums charged by insurance companies would be cut to such a low figure that every farmer could afford adequate insurance protection."

It is well within the limits of truth to say that sheet steel roofs of New Braunfels were actually paid for by the savings in fire loss and insurance premiums. For easy popular understanding, they might even be said to be "free" to their owners. The New Braunfels fire loss in 1925 was only \$2,800 on \$46,000 premiums paid!

Insurance folks say that 260 out of 322 causes of fire (35,000 fires tabulated) are preventable. This in round numbers is 80 per cent and is curiously near the New Braunfels percentage. If New Braunfels could reduce insurance rates so greatly and if 80 per cent of fires are preventable, surely the 20 per cent proposed saving from farm

fire losses ought not to be difficult to obtain.

Economics of 20 Per Cent Reduction in Farm Fire Losses

Twenty per cent of \$150,000,000 annual farm fire loss is \$30,000,000—a big sum. If a good roof can be put on a barn for \$300, \$30,000,000 would roof 100,000 barns or one barn in every 60. Last year one farm in 40 was visited by fire.

A more proper way to figure the saving is to capitalize the \$300 at 6 per cent and amortize over the period of the roof's life, which may be safely taken as a minimum of 20 years. In round numbers, let us take \$30 per year per roof for interest and amortization of the \$300 loan, and in this way 1,000,000 roofs could be put on for the \$30,000,000, or one-sixth of all barns in the country could have lightning and fireproof roofs.

These figures are large and are estimates. So are the fire loss figures large and are also pretty much estimates. The savings and the methods proposed are within safe limits for illustrative purposes.

Roof Specifications

The cheapest roof in first price that could be put on is paper, at from \$3.50 to \$5 per square. It gives good service where the construction is temporary and fire and lightning hazard is of no consequence. We mention it here because someone might think we had overlooked the roof that is cheapest in first price.

The headings for the specifications for the roof desired in our study are:

- (a) First Cost.
- (b) Long Life.
- (c) Fire Resistant or Fireproof.
- (d) Immunity Against Lightning.

Sheet steel meets all of these specifications most adequately.

Under (a) First Cost, here are the average costs per square of roof collected from contractors in widely scattered sections of the United States. Please observe that to the cost of roofs made of materials other than metal, the cost of good and thorough rodding against lightning should be added. This is un-

necessary where a grounded steel roof is used.

Galvanized corrugated sheet steel (lap joint)	\$8.00-\$9.00
Galvanized flat sheet steel (standing seam)	9.00-14.00
Galvanized sheet steel shingle	15.00-18.00
Asbestos shingle	20.00-22.00
Cement tile	25.00
Clay tile	35.00
Slate	30.00
Zinc	30.00-35.00
Copper	55.00

Under (b) Long Life, galvanized sheet steel will last from 20 to 30 years under average farm conditions and if painted, say every five years, will last indefinitely.

Under (c) Fire Resistant or Fireproof, galvanized sheet steel will give positive protection against ignition from sparks on the roof and, therefore, save the 6.3 per cent loss from this cause.

Under (d) Immunity Against Lightning, the galvanized sheet steel roof, when properly grounded, will immunize the building against lightning and thus save the 13.5 per cent loss from that source.

A sheet metal roof has another advantage. As soon as a fire breaks through any roof from the inside, the building becomes a chimney, in effect, and the rate of burning is increased. But a sheet metal roof blankets the fire and tends to prevent its spread to adjoining structures. It reduces exposure hazards.

The mechanical method of fire prevention by roofing the building with sheet metal, and thus warding off ignition from sparks and from lightning, applies just as well to the house on the farm as it does to the barn. The design and erection of homes of fireproof material have proceeded to a state that merits public consideration.

A home built entirely of fireproof materials was erected by C. H. Dexheimer & Son, Toledo, Ohio. It is a combination of brick and stucco and steel. The cost is about the same as if built of combustible materials, and when production is on a quantity basis, there is reason to believe that this fireproof construc-

tion can be done at even less first cost than wood. To say that a house can be very beautiful and no more expensive, though built of fireproof materials, sounds pretty strong. But so have lots of things in the last half century that have grown into practice and use way beyond the fondest hopes of their most sanguine early advocates.

The sound position is pretty well summed up in a statement in "Insurance Facts for the Farmer": "The best way to fight a fire is before it starts," and there should be added to this maximum, "with incombustible materials."

Immunity of Metal Roofs Against Lightning

Lyon, Conklin Company (in the metal roofing business in Baltimore since 1860) made some illuminating experiments on the effect of lightning on insulated and uninsulated buildings. Miniature barns covered with different kinds of roofing were subjected to an electrical discharge of 1,100,000 volts, approximately reproducing actual lightning. Any number of these experiments proved that a building covered with a metal roof grounded was the only one that could not be set on fire by lightning.

Recently Mr. Robert H. Lyon, vice-president of the Lyon, Conklin Company, wrote: "*In our investigations covering more than fifteen years, we have never found a building roofed with metal, properly grounded, that was destroyed by lightning.*"

We would appreciate being advised of any metal-roofed building fired by lightning that comes to your attention. We will endeavor to follow them up closely and thus accumulate field data that will yield information of real service to all.

Chicago Shippers Will Organize to Fight Rise in Switching Rates

Shippers in the Chicago district are seeking to form an organization to fight proposals of Chicago railroads to increase freight rates 20 to 120 per cent on iron and steel in the Chicago switching district. The first meeting was held at the office

of the Chicago Association of Commerce.

The Interstate Commerce Commission will be asked to suspend application of the rates pending

further hearing. Chicago district shippers will name a committee and appoint counsel.

Unless suspended, the proposed increase on steel and its products

will become effective October 20. The increase within the district for a one-line haul will be from $2\frac{1}{2}$ to 3 cents; for a two-line haul, from $2\frac{1}{2}$ to $5\frac{1}{2}$ cents.

Showing How to Develop a Canopy for a Lead Melting Pot

*Such Canopies Are Necessary
for Removal of Objectional Fumes*

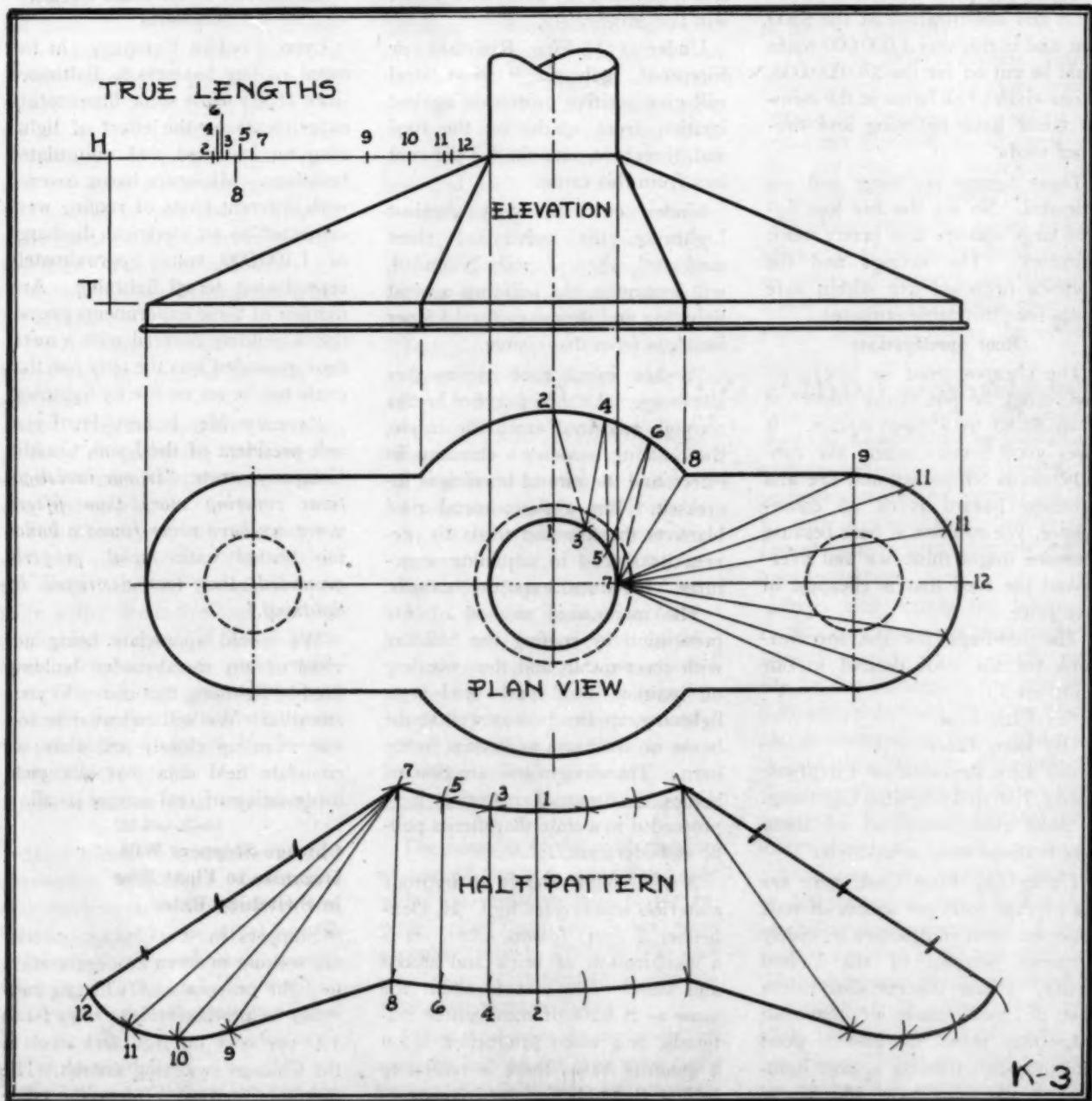
By O. W. KOTHE, Principal St. Louis Technical Institute

IN factory establishments, as well as in plumbing shops and trade schools, where lead is melted in

melting pots, using gas or electric heat, some means must be used to take away the fumes of the lead and

so hoods are constructed much as we show in this drawing.

Gas heat is never pleasant, since



Canopy for Lead Melting Pots

K-3

the flame often burns yellow and when they do this they give sickening odors which produce headaches. Electric heat is better and is becoming popular where it can be produced cheaply, but when lead itself is heated to a certain temperature some of the constituents vaporize, as for instance when tin is used in melting solder and sometimes when zinc is added by working process it causes trouble and in heating to a higher temperature it will burn giving off odors. Here again to provide for healthful surroundings and keep the men from getting headaches is a good investment since sick men cannot work as well as healthy men and, therefore, ventilation is an essential feature.

In observing our plan and elevation a rather oblong design is made where the far ends reach toward a center, thus forming a scalene cone, while the central body forms what may be a part of circle sloping toward a high point. When the plan is divided into spaces as we show from 1 to 2, 2 to 3, 3-4, etc., to 7 to 8 and then to 9 and 12, we can read-

ily bring our lines as shown. The elevation merely gives altitude and in shop practice does not need to be drawn. Here H-T is the altitude and we pick the lines from plan as 1-2; 2-3; 3-4, etc., and set them over on line H-2-3-4, etc., up to 12. Lines can be drawn to point T if desired and you have true lengths shown.

To set out pattern we draw a line 1-2 equal to T-2 of diagram. Then we use girth spaces 1-3 and 2-4 from plan and strike small arcs as at 3 and 4 in pattern. Pick true length T-3 and T-4 and using 2 in pattern as center, cross arcs in point 3. Then use new point 3 as center, cross arcs in point 4. Continue in this way always working from one point to another until line 7-12 is established which gives half pattern for hood. Edges for assembling must be allowed and on the bottom a rim is often added which can be joined to the edge of our canopy. This is a separate strip, cut equal to the circumference of outline of plan and having a wire enclosed along the bottom.

Kentucky Ladies Start Ball Rolling for National Sheet Metal Auxiliary

Four Large Cities Have Auxiliaries Formed and Twelve More Have Been Asked to Get Active

THE ladies of the Sheet Metal Contractors' Auxiliary of Louisville and Kentucky are busily engaged in putting out a letter requesting that every local and state organization in the national association organize a ladies' auxiliary, with the end in view of making it a national organization at the Dallas convention.

Up to the present time, locals are either formed or in the process of organizing in the following cities: Louisville, Kentucky; Toledo, Ohio; Chicago, Illinois; Dallas, Texas.

The secretary of the ladies' auxiliary, Miss Virginia Hutchison, is expecting to hear from the following very shortly in reference to gaining their assistance in organiz-

ing a national ladies' auxiliary:

G. I. Ray, Charlotte, North Carolina.

W. E. Newman, Ogden, Utah.
George Ruhl, Alliance, Ohio.
James Barrett, Alton, Illinois.
Frank G. Sink, Indianapolis.
J. O. Walsh, San Antonio, Texas.
Walter Budd, Durham, North Carolina.

R. E. Piper, Richmond, Virginia.
Dan Yaeger, Miami, Florida.
Joseph Mattingly, Indianapolis.
J. M. Fox, Birmingham, Alabama.

F. W. Mallu, New Orleans, Louisiana.

The secretary continues: "We, the ladies, are not telling why we picked out these names as our best bet; we simply did and that's all."

Some were selected for one reason and some for another, but without exception we have agreed that not one of them would leave a lady in distress, so we know beforehand that we will get their active support and assistance in forming these local and state ladies' auxiliaries, as we have decided that we have had more real pleasure at our meetings and social gatherings than we have ever had before."

Meet us in Dallas, Texas, in 1927.

The letter referred to heretofore was addressed to J. H. Wetzel, Bethlehem, Pennsylvania, and reads as follows—you can consider yourself the addressee.

"If you attended the national convention of Sheet Metal Contractors held in Louisville in May, it will not be necessary to go into details about the work our ladies' auxiliary is doing here.

"We organized our auxiliary in October, 1925, for the purpose of raising funds to entertain the ladies who attended the national convention, and, needless to say, we did not fall down on the job.

"We believe that other wives, daughters and stenographers of sheet metal contractors throughout the country will enjoy an auxiliary just as much as we have in Louisville, so I have been requested to ask you to see that a chairman is appointed in Bethlehem to organize a ladies' auxiliary. We had the pleasure of entertaining Miss Ella Hesky and Mrs. Hesky from Bethlehem during the convention and we believe you could interest them in an auxiliary.

"If you are as interested in the success of your association as we are here in Louisville, you will readily see the advantage of a ladies' auxiliary working with the men's association to promote clearer understanding and higher ideals among the members of our association.

"We would appreciate a letter from you stating your views as to the possibilities of the work we are undertaking."

The letter was signed by Miss Virginia Hutchison, secretary

Ladies' Auxiliary, Sheet Metal and Roofing Contractors' Association of Kentucky.

**Oscar M. Bakko
Makes Good Progress
at Wanamingo, Minnesota**

Oscar M. Bakko, Wanamingo, Minnesota, who recently opened a combination sheet metal, warm air heating and plumbing shop, is meet-

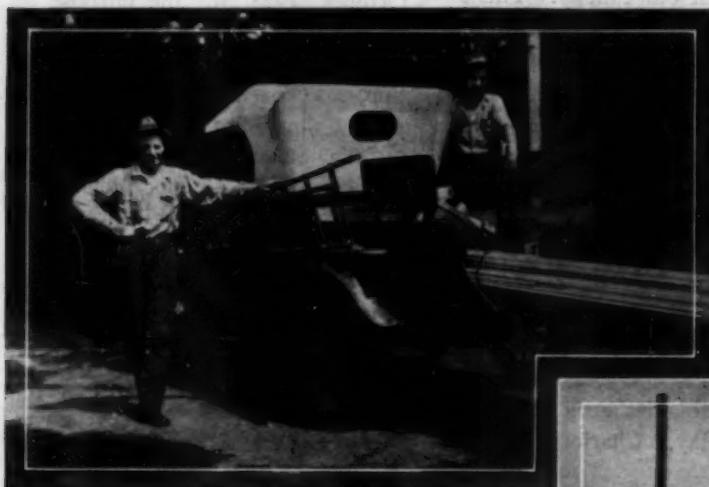
ing with fine success with his new enterprise. Prior to entering business for himself Mr. Bakko worked in other sheet metal shops for a period of fifteen years and has a thorough knowledge of all phases of the work he is now doing. He has a shop which is up-to-date in every respect, and the business gives promise of steady, healthy expansion.

Son of South Bend Sheet Metal Contractor Designs Sheet Metal Truck Top

Illustrates What Proper Training and Cooperation from Dad Can Do

HERE has been a great deal said in sheet metal circles about the increasing need for trained mechanics—men who can originate

this respect. They have come to the conclusion that in order to have an adequate supply of trained men from which to draw as their needs



E. M. Hutchins and His Son, South Bend, Indiana, and the Sheet Metal Automobile Top Designed by the Younger Hutchins.

and bring to a satisfactory completion sheet metal work of a highly complicated nature.

This need is the resultant outgrowth to a great extent of the restricted immigration laws that have been put into operation in the United States during the past five or more years.

But be the causes of a lack of trained men in the sheet metal industry what they may, the fact remains that sheet metal men are awake and alive to their needs in



Hollow Copper Turret Skylight Erected by E. M. Hutchins, South Bend, Indiana.

demand they must train apprentices within their own shops and in schools (both day and evening) over

which they at least have some supervision.

In many sections of the country these schools have been in operation long enough so that their results can be definitely checked, and these results are very encouraging. Sheet metal contractors have taken a hold of the problem. They are not only doing what they can individually to alleviate the situation, but collectively, too. The apprentice training plan which the National Association of Sheet Metal Contractors has worked out is a very comprehensive one and a distinct contribution to the educational work that is being done.

The accompanying illustration represents some of the results which are being produced. One of the photographs is that of a hollow copper turret skylight. The other photograph is that of a sheet metal top for a truck.

The two men shown in the illustration are Mr. E. M. Hutchins and his son. The elder Hutchins is a sheet metal contractor of South Bend, Indiana, and the younger is employed in the shop or learning the business.

The truck top was designed and worked out entirely by the younger Mr. Hutchins, all of which shows what can be done with the sheet metal apprentice who receives proper

training for his work.

In the words of Harry R. Jones, Indiana representative of the Mil-

waukee Corrugating Company, who called our attention to the enterprising Hutchins sheet metal organization, "Like father, like son, both are real sheet metal mechanics, and their experience and accomplishment should be an inspiration to other contractors who have sons that might develop into sheet metal men with the proper encouragement from their dads, together with a thorough fundamental training."

**E. W. Kreidler, Halfway,
Michigan, Making Plans
For Larger Building**

At the present time plans are being made by E. W. Kreidler, a sheet metal contractor at Halfway, Michigan, for the erection of a much larger building than he now occupies to care for his ever-increasing business.

men besides himself.

As many another sheet metal contractor has done to establish himself, Mr. Kreidler started out by making small appliances for some manufacturing concern.

At the present time he is building brine tanks for the Whitehead Home Refrigeration Machine Company, an average of 250 tanks being built per month.

Along with this line Mr. Kreidler is installing and repairing furnaces.

**Mengedoth & Popple,
Rochester, Minnesota,
Find Business Good**

Frank A. Mengedoth, of the firm of Mengedoth & Popple, 319½ South Broadway, Rochester, Minnesota, reports that business in and around Rochester has been very



Interior View of the H. Tiedman Hardware Company Store located at Chaska, Minnesota.

A completely equipped sheet metal shop and a thriving business built up all in the space of three years is indeed an accomplishment worthy of more than a passing note. This is the record which Mr. E. W. Kreidler has established.

About three years ago Mr. Kreidler struck out for himself and after a little hard plugging he reached a stage where today he has a sound business of his own, employing five

good during the past year. Mr. Mengedoth has been in the sheet metal business for a period of twenty years, sixteen years of which time their store has been located at the address given heretofore. The shop of Mengedoth & Popple is up-to-date in every respect, containing a full complement of tools and all other equipment necessary to the conduct of an efficient sheet metal contracting business.



Repairs for Pease Economy Furnace
From C. W. Filby, Jefferson, Ohio.

Please advise us who has taken over the Pease Economy furnaces, as we want repairs for the Pease Economy Number 14 hard coal furnace.

Ans.—International Heater Company, Utica, New York. Repairs may also be had from Northwestern Stove Repair Company, 654 West Roosevelt road, Chicago.

Electric Churns

From O. M. Barnard, Homer, Louisiana.

Could you advise me the manufacturer of electric churning?

Ans.—Creamery Package Manufacturing Company, 61 West Kinzie street, Chicago, Illinois; D. H. Burrell Company, Incorporated, Little Falls, New York, and Dazey Churn Manufacturing Company, 4301 Warne, St. Louis, Missouri.

Machine Steel

From J. L. Williams, Salitpa, Alabama.

Please inform where I can secure machine steel, size 1/16 by ½ and ¼ by ½.

Ans.—Joseph T. Ryerson and Son, 2558 West 15th street, Chicago, Illinois, and United Alloy Steel Corporation, Canton, Ohio.

Repairs for Walter Rait Furnace

From Mrasek and Sauter Tin and Sheet Metal Works, 371 North Main Street, Memphis, Tennessee.

We would like to know where to get grates for a Walter Rait furnace No. 2042.

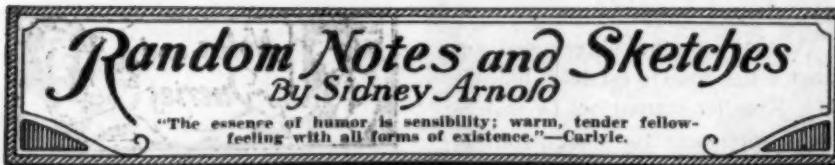
Ans.—Northwestern Stove Repair Company, 654 West Roosevelt Road, Chicago, Illinois.

Seamless Copper Tubing

From C. McEntarier, Eureka, Kansas.

Kindly advise where I can secure seamless copper tubing the thickness of 20 gauge steel and from 1 inch to 1½ inch diameter.

Ans.—Merchant and Evans Company, Kansas City, Missouri; American Brass Company, 111 West Washington street, Chicago, Illinois, and Chase Metal Works, 237 Grand street, Waterbury, Connecticut.



I learned with a great deal of sorrow that the New York representative of AMERICAN ARTISAN, Mr. W. C. White, is at home confined to his bed with a rather serious illness. It is thought that he will have to be operated upon and will be confined to his home for two or three months. I don't like to learn of these illnesses, and I am sure that Mr. White's friends in the East will join with me in hoping that his illness will not be as confining as it is now feared it will be.

* * *

Speaking of high finance and of the bank in the north shore suburb that closed its doors the other day, I've been reminded of the four animals that went to the circus—a duck, a pig, a frog and a skunk. All of them got in but one. The duck had a bill, the pig had four quarters, the frog had a green back, but the skunk had only a scent and that was a bad one.

* * *

"Ah, madam," said the pious visitor, "I am going about giving advice and consolation to unhappy wives. Do you know where your husband is every night?"

"Indeed, I do."

"Alas, madam. You think you do, but he may be here, there, anywhere."

"Well, if he gets out of the place where he is now he has to raise a granite slab that weighs at least a ton, and he couldn't even lift a scuttle of coal when he was alive."

—*Western Druggist.*

* * *

I had a delightful chat with Mr. J. C. Kernchen, president of the Kernchen Company, makers of the Kernchen siphonage ventilator. Mr. Kernchen certainly knows his "stuff" when it comes to talking about ventilating problems. The thing I started out to say at this

time, however, was that after I had talked with Mr. Kernchen for a considerable length of time and had made a general pest of myself, a broad smile spread over his countenance and he told me that on Monday of this week he became the proud papa of little Charlotte Alace. And, of course, congratulations were immediately in order. This is the second time that Mr. Kernchen has become a papa. A picture of his first daughter, Dorothy Jane, occupies a prominent position on Mr. Kernchen's desk. Mrs. Kernchen is at the Lying-In Hospital and is progressing very nicely.

* * *

American Slang

"All right, all right, all right, what's eating you? You're the cat's adenoids, aren't you? Beat it! I wasn't born yesterday, big boy! Banana oil! You're the berries, all right, all right, but you can't buffalo a wise guy! Raspberries! You big stiff, pull in your nose! D'ja get that, huh? So's your old man!"

And When the Englishman Tried to Say It:

"Righto, righto, righto, what's devouring you, old chappie? You claim to be the kitty's mucous membrane, do you not? Pound it! I didn't come into the world within the last fortnight, large lad! Fruit juice! You're the huckleberries, I must admit, you know, but you can't kangaroo a philosopher, don't you know, old bean? Cocoanuts! You monstrous unlimber laddie, kindly pull in your nasal organ! Did you receive that, old egg? Your father is, too!"—Franklin Frey.

* * *

I learned the other day that Joe Stearns, who now heads the Stearns Register Company, Detroit, Michigan, has not always been in the business of manufacturing warm air furnace registers. A mutual friend told me that when Joe was still at the age where he was groping

around for a field in which to utilize his talents and incidentally out of which he could carve a fortune, he took a job in one of the downtown Detroit music stores.

One day a pretty young woman stepped into the shop. She tripped lightly to the assorted music counter, the one over Joe was placed to preside, and in her sweetest tones asked: "Have you 'Kissed Me in the Moonlight'?"

Joe thought for an instant and then replied disconsolately: "It must have been the man at the other counter. I've only been working here a week."

* * *

Speaking of worrying and poor relations, I've pretty near come to the conclusion that life is made up of a succession of compensations. For instance, we've heard for some time now the impending plight of the hardware man. The drug stores, the chain stores, the variety stores, the glorified peddler and the gigantic mail order houses are supposed to be linked together in one great effort to put the poor hardware man out of business. But in spite of the fact that this great invisible force has been at work for some time, the hardware man continues in business the same as ever. But where does the compensation come in? Just here. The hardware man confronted with these numerous competitors is compelled to work a little harder for what he gets, but in the doing thereof he develops himself to a higher state of proficiency, which in turn again brings him to the level with the forces that are trying to put him out of business. It's much easier to stand adversity than prosperity, because opposition just naturally tends to make you strong. So I wish that I could just bring my friends in the sheet metal and warm air heating industries to realize that opposition from the price cutters will make the former work a little harder, but the compensation will be that in working harder they will develop latent faculties that will help them to overcome opposition which they now fear, apparently.

The Editor's Page

Is Chicago to Have Standard Furnace Code Ordinance?

IT is reported that an ordinance providing for approval by the City of Chicago Building Department of plans for all warm air furnace installations and inspection of all installations by the city is to be introduced in the city council by Alderman Sheldon W. Govier of the 9th Ward. If this proposed ordinance becomes a part of the building code of the city of Chicago, one of the biggest obstacles in the way of good furnace work in that city will have been removed. To have the Standard Furnace Code incorporated in the building code of a city the size of Chicago is analogous to having the Standard Code accepted by the country at large. Many smaller cities use the building ordinance of Chicago as a guide for their own.

The better class of warm air furnace installer in the city of Chicago has long felt the need for some standardized method of installing furnaces that would guide him in his work. This guide he will have in the ordinance which Professor A. C. Willard, of the University of Illinois, and Professor A. T. Stewart, of the University of Michigan, have drafted.

These furnace installers, who represent the membership of the Cook County Sheet Metal Club, will have more than a guide in the new ordinance. They will have an instrument which will protect them from the inroads that are made on their business by the cheap furnace installers now operating within the city. Instances are not lacking where these cheap installers have taken jobs at a figure that would hardly net them a profit of five dollars on the job. The result is that the job is thrown together in a most haphazard manner. The furnaces used are in most cases too small for the work they are to do, while the cold and warm air ducts are rarely ever sized in accordance with the actual needs of the dwelling in which the installation is to be made. All this will be changed.

While an inspector who is under the jurisdiction of the city building department making the rounds to see that all jobs are installed in accordance with the city building ordinance, which in turn contains the Standard Furnace Code, all of this cheap work will be done away with. The furnace installer will be compelled by law to meet certain specified conditions in his work of installing warm air furnaces. It will no longer be possible for him to skimp on the materials he uses; he will not be able to put in a furnace that is too small for the requirements of the house. The result will be that the entire industry in the city of Chicago will be automatically placed upon a much higher plane than that which it now has. This is in accordance with the fondest wishes of the industry.

The warm air furnace installer in the city of Chicago

who is now conscientiously using the Standard Furnace Code in his work can look forward to much easier sailing in the near future in the event that the ordinance drafted by Professor A. C. Willard and A. T. Stewart becomes a part of the Chicago city building ordinance. The members of the Cook County Sheet Club should do all in their power to get this ordinance adopted for their own protection as well as for that of their present and prospective customers.

Some Salesmen Still Attempting to Mislead

IT is now some months ago since President E. B. Langenberg of the National Warm Air Heating and Ventilating Association issued the warning to warm air furnace and supply salesmen to stop misleading their customers with regard to the research work in the interests of better warm air heating that is being carried on at the University of Illinois. In spite of this warning instances are again being brought to our attention of attempts to mislead.

In order to stop this despicable practice we again call the attention of our readers to the fact that the University of Illinois has a contract with the National Warm Air Heating and Ventilating Association alone to carry on certain research work. The individual manufacturers are in no way represented in the contract, except as a collective body.

The University of Illinois never has had and never will under the terms of the present contract take any manufacturer's product to the university for the express purpose of testing that product. Any furnace or furnace supply salesman who tries to mislead the installer or the public by telling them that his firm's products have been tested at the University of Illinois is guilty of a misdemeanor that should be punished by immediate dismissal from service. This practice must be uprooted before harm is done.

It is easy to understand how an unscrupulous furnace salesman, confronted with the desire for producing quick and easy results, would fall into the practice of telling his prospective customers that his materials are of superior quality, because tests at the University of Illinois have proved them to be so.

We believe that the desire among the good salesmen to stamp out this sort of practice is as strong as it is among the furnace and supply manufacturers and jobbers themselves.

It is the duty of every furnace installer who experiences such attempts to mislead him to report the offending salesman to the manufacturer whom the former represents or to the secretary of the National Warm Air Heating and Ventilating Association, whose headquarters are at Columbus, Ohio.

Are You One of Those Furnace Installers Who Is Double Crossing Himself?

Standard Furnace Code Not a Miniature 18th Amendment for the Industry

By L. WAYNE ARNY, Director Public Relations, National Warm Air Heating and Ventilating Association

TRADE meetings, in the minds of many persons who attend them, are like a game of poker. You may win, or you may lose, but whatever happens they have no bearing on what you do afterward. Hardly a meeting is held, in any industry, at any place, that someone does not make the statement that Jones said one thing and then went home and did another.

That idea is prevalent. There are people in the warm air heating industry who have said that dealers have agreed in meeting to install according to the Standard Code, but when a chance comes along to put in a job below Code standard, they forget their good intentions in their zeal to book some business.

If that were true, the industry as a whole would, indeed, be in a deplorable condition; there would be little value in being in it.

There are dealers who are double-crossing themselves. There are dealers who will make installations at almost any figure just to get a job. Perhaps some of these have signed the Code Pledge Cards. It makes very little difference whether they have or have not, for their business life, in the normal course of events, will not be very long nor very prosperous.

For the sake of those, however, who make the statement that dealers pledge themselves to install according to the Code and then forget about it, it will be interesting to review briefly the statements of some successful dealers on this point and to learn how they feel about it.

The following quotations are from dealer letters, written in reply to an inquiry as to how they secured their prospect lists. In each case the dealer was known to be building a growing and successful business. He was asked how he accomplished

it in the face of the keen competition that exists in certain localities. He had no idea that his remarks would ever see the light of print; he simply gave his method as a part of his general sales policy for whatever it might be worth. It must be remembered that in every case the dealer quoted is probably the leading installer of warm air furnaces in his community.

job should be. Very often in this way we get much more money for our job than the owner originally thought it was necessary to pay. We have so many fine working, well installed jobs in this territory that we can take a prospect to these jobs, show him the work and allow him to talk to the people and find out for himself just the kind of work our organization does. We do not have any special sales arguments or any particular line that we give them, except quality and good workmanship, and the fact that we are established and have our reputation to maintain and insist on a reasonable profit on every job."

Do you believe that the dealer who wrote that is double-crossing himself? Do you think he is scheming to deceive everybody into thinking he is putting in Code jobs when really he is not? If you do, a visit to his plant would dispell any such illusion. That dealer uses the Code on every job he puts in; he has a thoroughly modern shop, with a live sales organization and is selling jobs at good prices right under the nose of his competitors, who sit around and wonder what the Code is all about.

Another dealer talks on the same subject and has this to say:

"A company or individual succeeds or fails according to the grade of work it renders to the public—that is, according to how well it does its job. Every furnace installer in the United States, if he is in a town of any size is up against the keenest of competition.

"Competition is the life of any business and my competitors are just men who are playing the game with me. In any game, in order to win in the end, it must be played fair and square. In this furnace game, one is not playing fair and



L. Wayne Arny
Directors Public Relations

One dealer said: "The reason we have been so successful in using the Standard Furnace Code in this territory is that we do not sell very many contractors and, in fact, have practically cut out speculative builders entirely. We can not put in furnaces at prices these speculative builders want and will pay, and do justice to ourselves and the man who afterward lives in the house; so in every case where it is possible for us to do so, we sell to owners and we try to have the owner (when we can get to him in time) reserve the heating. Then we have an opportunity to sit down with the owner and his wife and explain to them what a real good warm air heating

square unless he is following the rules of the game—the Standard Code. We are getting enough honest installers in the game so that the others will have to become honest or they will be put out. If I am successful in any game, I must first be interested. I am interested in this game—interested because I am making money.

"I want money not only for the pleasure it brings to me personally, but for the service I can render to humanity. Again I am interested in this game because my business can be made a blessing to every man who works for me and can be made a public service to every customer who buys. The significance of any game depends upon the prize. This prize that I have in mind is worth working for and I am putting forth every faculty that I possess to win.

And what is more, I believe I am going to win."

Probably every sheet metal contractor who reads these lines knows the person who wrote them, for they come from one who has built a successful business along the lines of fair dealing and Standard Code furnace installation, and who is prominent in the industry. If this person makes such statements as the foregoing either by letter or in a public meeting and then goes home and takes cheap business and makes poor installations—then four and four are nine.

Were AMERICAN ARTISAN willing to devote all of the pages of this issue to similar letters from furnace dealers, there would be plenty of letters to fill them and probably several more issues. They have come from dealers in every part

of the country; mostly from those who are leaders in their respective communities. These dealers have not adopted the Code because it sounds well, or because someone has recommended it, or because some competitor has done so. They have adopted it because they have found it the most successful business builder that is available; because people everywhere are coming to understand that the Code is the one national guarantee against beating troubles and are demanding it.

If the dealer who has regarded the Code as a sort of 18th Amendment comes to realize that he is on the wrong track, that he is double-crossing himself, he will then have made the most important discovery of his recent career, and he will profit by it as well.

Warm Air Furnace Man Discovers He's Selling to Wrong Class

Reverses Sales Policy and Cheap Competition Ceases to Be a Factor

BUT your price is too high!" exclaimed the impatient home owner who sat at the steering wheel of his new Buick, while the warm air furnace contracting salesman attempted to interest him in an installation for his new home. "And so it goes! We hear the same old story from one year's end to another and still manufacturers wonder why we are obliged to cut prices," said the furnace man to himself as he was left standing in a cloud of blue smoke produced by the sudden starting of the home owner's car.

"If I could only meet that price talk," thinks the salesman, "I'd have things my own way."

Well, Mr. Furnace man, you can meet that price talk and very effectively too.

Did it ever occur to you that the automobile salesman runs up against the same sales resistance that you do? The only difference is that the automobile salesman's

proposition is intensified about five times that of yours.

How do you suppose the salesmen for the Lincoln, Cadillac, Packard and Rolls Royce cars dispose of their products? Do you think that if they were going to go at it from a purely price standpoint that they could ever make their salt? No, they could not. There are too many cheaper cars that will provide fairly good transportation for the salesmen of the higher priced cars to get anywhere on price alone.

Why not analyze the proposition in this manner? If a Cadillac costs more than a Ford, there must be some reason for the increase. Manufacturers don't just increase their prices arbitrarily. The reason is simple. The Cadillac is a much better car than the Ford. The fact of the matter is that these two cars are not even competitors of one another, because they are in two entirely different classes. The same thing applies to furnaces. The principle is

all the same.

If you are selling a warm air furnace that costs more than a warm air furnace sold by some other installer, the thing for you to do before ever attempting to sell your furnace at all is to analyze the two furnaces and learn why the cost of the one is greater than that of the other. If you are observant, the reason for the increased cost will not be a secret for long.

After you have thoroughly analyzed the product you want to sell and the products with which you are going to come into competition, you are then ready to meet your customer. And you meet him not by emphasizing the higher price of your furnace, but by pointing out the good points which your furnace and your heating system have in contrast to those which the lower-priced competitors have.

The customer buying a furnace is just as easily convinced that there are good, better and best grades of

furnaces as he is that this is true in the automobile, the clothing and the building material industry.

It's up to you to sell the customer on quality of products and reliable, dependable service. Once you have done that, the price argument in most cases becomes only incidental.

The great trouble with many warm air installers is that they get panicky when the customer starts to mention the price at which he can buy a furnace installation from some competitor. They seem to lose sight of the fact that they are selling a product that is superior in quality and more dependable in performance than that which was offered the customer at a much less figure.

The warm air furnace installer who expects to make a fortune out of the warm air heating business by cutting prices is doomed to failure and disappointment before he starts. This should be self-evident to the discerning contractor.

A letter came into our office the other day from a sheet metal contractor who said that he had for a long time been seriously considering giving up the furnace end of his business. He said he lived on the outskirts of Chicago and that for a time things got so bad that he had to meet competition from installers who would take on a job of putting in an entire warm air heating plant on a margin of profit of \$5.

He got to thinking the matter over. He wondered why it was that a man who was perfectly capable of and willing to put in a warm air heating system that would give entire satisfaction had to compete with price-cutting competition. In trying to solve the problem that was before him, this man did what so many other successful men have done, he went to other industries and other successful men in his own industry and had the answer to his perplexing problem handed to him on a silver platter. This man had deluded himself that he was compelled to meet cheap competition. He had not taken into account the mental status of the different classes

of customers. In a word, he had lost faith in human nature.

As soon as he realized that he was attempting to sell to the wrong class of customer, he saw why he was not making money. He had been trying to sell his service and product to a class of customer who could not appreciate the value of dependable, adequate service; who saw only the low first cost; who had not been trained to demand the best.

This man, as soon as he realized his error, reversed his sales policies. He picked out the class of homes in which he thought his warm air heating system would render the best service and then sold the home owner on the basis of comfort and freedom from illness in the home. After he had convinced the customer that he was assured comfort during the coldest weather, he brought in the flexibility and economy features of the system. By the time he had arrived at the price, the customer was so well sold on the service he was to get that the price of the system had ceased to be a deciding factor. The man is making money now, where once he was starving to death.

In regard to the price that is to be received for the product the furnace business is no different than any other business. The warm air furnace customer must be impressed with the superiority of that system over all others before he can be made to spend the money on it. He must be shown that there are grades and classes in warm air furnaces as well as in other lines of business—the automobile for one. His sense of discrimination must be appealed to. When this is done, the warm air furnace installer who goes after the better class of customer will be able to make money sufficient to bring his business and sales room out on the main street too. It can't be done by cutting prices.

Chicago to Have Warm Air Furnace Ordinance and Inspection

A city ordinance providing for approval by the city building department of plans for all warm air

furnace installations and inspection of all installations by the city of Chicago is to be introduced in the city council by Alderman Sheldon W. Govier, 11350 Forestville Avenue, Chicago, Alderman of the 9th Ward, whose telephone number is Kollman 6100.

The ordinance is based on the model warm air heating ordinance drawn up by Professor A. T. Stewart of the University of Michigan, Professor A. C. Willard of the University of Illinois and a committee of the National Warm Air Heating and Ventilating Association.

The new ordinance would lessen the fire hazard in homes and would protect householders against the dangers of furnace-generated carbon monoxide gas, its backers assert.

R. J. Schwab & Sons Company, Milwaukee, Increase Their Office Space

The R. J. Schwab & Sons Company, 283 Clinton Street, Milwaukee, Wisconsin, makers of Gilt Edge warm air furnaces, have been engaged in rearranging their office, giving them larger space for the conduct of their increasing business. The installation of a new and larger office switchboard has made it necessary to change the office telephone number. The new telephone number of the company is Hanover 5630.

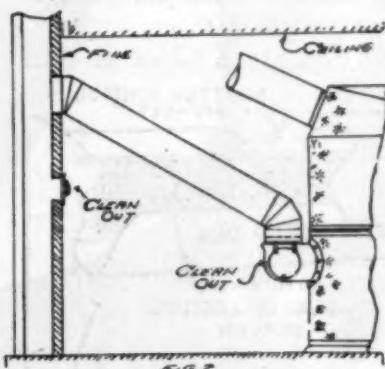
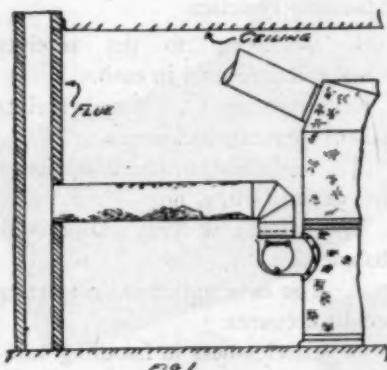
Faulty Chimney Cause of Many Complaints Against Warm Air Furnace

The Gas Draft, the interesting little house organ of the Meyer Furnace Company, is starting a series of articles on Chimneys and Draft. The first of this series is reprinted below for the benefit of the readers of AMERICAN ARTISAN.

We feel it in order at this time to write something on chimney construction, because at this time of year more and more furnaces are being installed and we are right now again on the verge of a heating season when we will hear occasional complaints resulting from poor draft conditions—smoke coming out

of fuel door, fire going out with plenty of coal in the fire pot, and the like.

Usually the furnace man is called in and "called down" when really he is not to blame. In most cases the chimney is at fault, but the furnace man must be in a position to point out and explain the cause of any difficulty, and in order to help him



advise intelligently, we shall endeavor to cite a few of the most common causes for complaints. We fully realize that this entire issue could easily be devoted to faulty chimney construction and chimney troubles—in fact volumes could be written on the subject—but we will only cover a few of the more common complaints.

Frequently a warm air furnace is condemned because of poor draft, which is utterly foolish when one stops to think that a furnace possesses no draft of its own, and is dependent upon the chimney to carry away the waste products of combustion.

A great many complaints would be averted if furnace installers were even more careful to see that a chimney of sufficient size and ample draft is provided before installing and connecting a furnace. A warm air furnace should under no circumstances be connected to a chimney of less than 8-inch by 8-inch dimensions for a square construction, or 8-inch diameter, and the following fact should not be overlooked:

A chimney 8-inch by 8-inch of square construction, although containing 8-inches more area than a round chimney 8-inches in diameter, is no more effective than the latter.

The accompanying drawings illustrate a very common cause for complaint, figure I showing smoke pipe leading from furnace to chimney without elevation, the accumulation of ash and soot retarding draft and resulting in a tendency to smoke. Figure II shows an elevation which at the same time increases velocity, carrying dust along

the catalog are well selected to convey to the reader an excellent idea of the appearance of the register or face.

The furnace installer who wishes to keep abreast of the latest thing in registers and faces will do well to write for a copy of this catalog.

J. F. Shomaker Has Trouble With Window Sweating—Can You Help Him?

To AMERICAN ARTISAN :

I have a new 2-family bungalow flat, having two warm air furnace installations. I am having trouble with window sweating in the sun parlor on the second floor. This sun parlor is located in the rear of the house.

I have six rooms and a large stair landing. I am taking my cold air down stairs at the front door or reception hall through an 18-inch cold air pipe.

Do you think I am getting enough cold air? Should I run an 8-inch auxiliary pipe to the outside?

I have no trouble with the lower flat. I take the cold air from the dining room.

JAMES F. SHOMAKER,
East St. Louis.

What Is Your Average Overhead—Your Selling Cost?

About every so often a letter comes into the editorial department of AMERICAN ARTISAN asking for information about the average rate of overhead or operating cost of a business doing a certain specified gross business per year. The latest one of this kind reads somewhat as follows:

To AMERICAN ARTISAN :

"Will you kindly write us if you have any information regarding the overhead or operating cost of a plumbing and heating shop doing a business around \$100,000 a year, and of this overhead figure how much is set up for the cost of selling?"

About the only way we have of supplying such information is to call upon our readers, asking them for their experience in this respect. If

The illustrations used throughout

you have any definite figures that would fit the requirements of the case mentioned above, we would be glad to have you send them to us so that we can compile a set of statistics.

Tayco Register Shield Company Develops Air Washer and Humidifier Combined

With the increasing interest in the warm air heating system and the development that has been brought about there has also come into being many accessories to the warm air furnace.

The Tayco Register Shield Company, Menasha, Wisconsin, has developed what is known as the Tayco register shield. This device is attached to the warm air register and serves the purpose of air washer and humidifier.

The shield, as shown in the accompanying illustration, contains a water pan and is attached to the outside of the warm air register. As the warm air rushes out of the warm air duct, it passes over this water pan and evaporates the water. The shield also acts as a deflector, forcing the warm air down to the floor after it leaves the register. It is so constructed as to fit on the outside of the wall register by means of two adjustable wire hooks and is applied without the use of tools. The shield is finished in black Duco, black body oxidized copper cover or nickel.

Don't Allow Strangers to Get Hold of Your Letter Heads

Recently a well dressed man entered the Cooley Hardware at Canandaigua, New York, and introduced himself as a trouble-shooter for the Radio Corporation of America.

He asked a number of questions which served to impress the fact that he knew the radio business, and

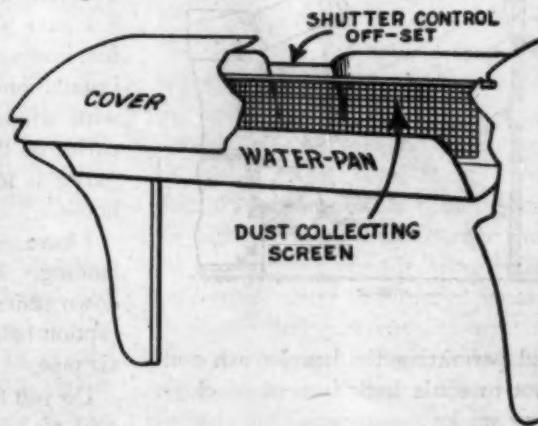
to convince the owner that he was really what he claimed to be.

Later he asked for a letterhead so that he might send it in for some advertising copy.

He left promising to come back the following day.

Two days later the Cooley Hardware received an invoice from Weed & Company, Rochester, for 300 pounds of solder amounting to a little over \$115.00.

The faker had forged an order



Showing Cross-Section of the Register Shield

for the solder on Weed & Company. He had then driven up to the back door, loaded the solder, signed the delivery ticket and disappeared.

He introduced himself by the name of Davis. He signed the delivery ticket "H. Palmer." He is about 5 feet 9 inches, dark complexion and weighs about 180 pounds.

Moral: *Don't let strangers get hold of your blank orders, or letterheads.*

Is Your Heart in the Right Place? Here's How You Can Tell

Do you devote as much time to the work of building your organization as you might? Do you make friends? Do you do unto others as you would like them to do to you?

If your heart is in the right place you can answer yes to all of these questions and you need have no fear for the future, because you are bound to succeed.

Watch, for you know not when opportunity will come. In fact, it is

here now, all around, for those that can see it.

Look upon work, your work, as a joy. Let nothing discourage you. The only way to succeed is to put every ounce of energy you possess into your every task. This means success and happiness.

Some Common Departures from Good Business Practice

1. Neglecting to get receipts when bills are paid in cash.
2. Neglecting to keep receipts where they can be located.
3. Neglecting to check up items in current bills.
4. Inability to keep check book balanced.
5. Too easy optimism in starting credit accounts.
6. Carelessness in handling valuable business papers.
7. Signing documents without first knowing their contents.
8. Tendency to establish living expenses which would exceed income and eat into savings.
9. Tendency to invest money on dangerous hearsay, without proper knowledge of facts.

Personal Appearance Important in Retail Hardware Store

There should be always someone about the hardware store whose appearance is above reproach when women enter.

Emerging from the back storeroom or tinshop or from the basement with soiled shirt and perhaps a dirt begrimed face does not make a favorable impression upon the woman who is spotlessly clean about her own home. The customer perhaps is stylishly dressed in a summer gown and resents being waited upon by a man whose appearance is not what it should be.

Perhaps the customer is searching for a set of silverware, a carving set, or it might be a washing machine—the sale of which will require some time for demonstration and talk about quality, brands, merits and other points.

A pair of soiled hands are an in-

INSIST UPON
DIECKMANN
ELBOWS AND SHOES

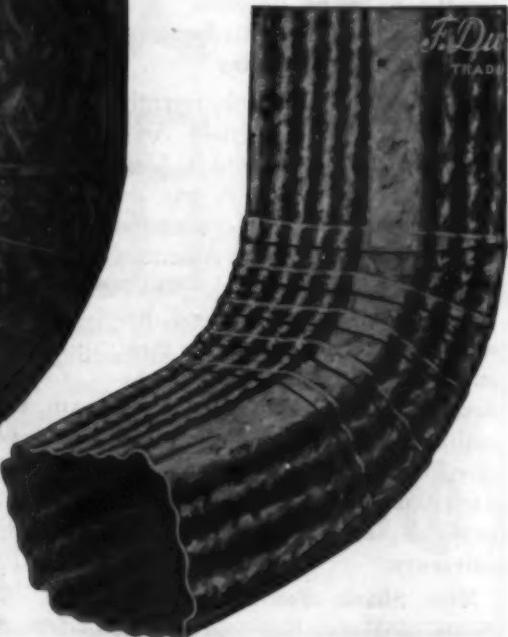


F. Dieckmann

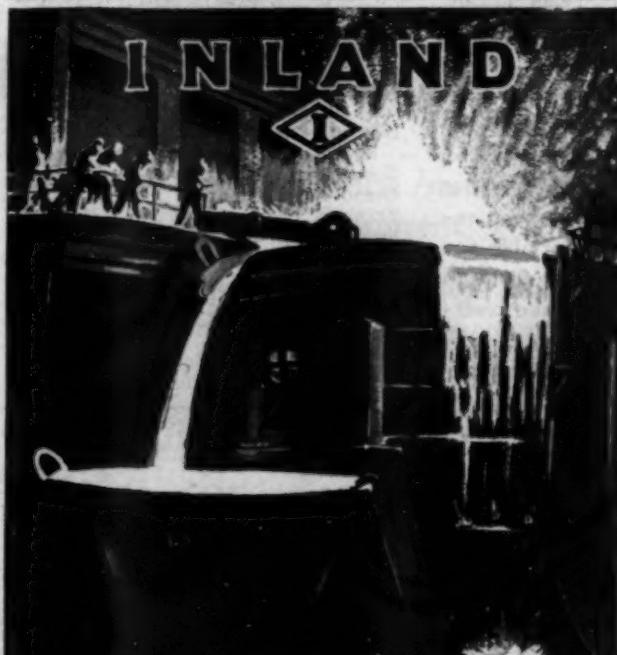
TRADE MARK



ALL JOBBERS HAVE
THEM OR CAN GET
THEM FOR YOU



The Ferdinand Dieckmann Co. P. O. Station B,
Cincinnati, Ohio



At the
Service
of Steel
Users

INLAND STEEL COMPANY

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Works: Indiana Harbor, Indiana; Milwaukee, Wisconsin
Chicago Heights, Illinois
Branch Offices and Representatives
ST. PAUL • ST. LOUIS • SALT LAKE CITY • MILWAUKEE
KANSAS CITY • NEW ORLEANS • EL PASO

ARMCO INGOT IRON
The Purest Iron Made

ARCHITECTS and Contractors are well acquainted with this long-lasting sheet metal. Our stock includes every size and gauge required by the trade.

"Since 1866" we have been serving and satisfying customers in all parts of the country.

Everything in Sheet Metal

Coke and Charcoal
Tin Plate
Roofing Plate
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Gutter
Tinner's Supplies

Brass—Copper
Nickel
(in all forms)
"Mond-70"
Babbitt
Solder

MERCHANT & EVANS CO.
PHILADELPHIA

WAREHOUSES

NEW YORK CLEVELAND
KANSAS CITY DETROIT
CHICAGO



comparable handicap, and yet there are hundreds of dealers who approach customers in this identical manner.

Is it any wonder that women, as a rule, have been shunning the average hardware store?

Dorothy E. Shank Becomes Director of Research Kitchens, American Stove Company

Miss Dorothy E. Shank, recently an instructor of Household Arts, Teachers College, Columbia University, New York City, has assumed the duties of Director of the Research Kitchens of the American Stove Company, Cleveland, Ohio.

Miss Shank taught Food Research at Teachers College for three years. She received the title of Associate in Household Arts at Lewis Institute, Chicago, and later received her Bachelor of Science and Master of Arts degrees and a Supervisor's Diploma at Columbia University.

Miss Shank also taught many phases of Home Economics Work at Lasell Seminary, Auburndale, Massachusetts; Dickinson Seminary, Williamsport, Pennsylvania, and at the New Jersey College for Women at New Brunswick, New Jersey.

In addition to her teaching experience, Miss Shank has done considerable Research work for many commercial firms. She is also a well known writer on Home Economics subjects for the magazines.

In selecting Miss Shank for this position the American Stove Company feels that it has made a wise choice, and that she will be equal to the task of carrying on the excellent work that is being done by the Research Kitchens.

The American Stove Company maintains Research Kitchens at 4301 Perkins Avenue, Cleveland, Ohio, where all recipes are tested out before being published either in our cook book or in our advertising. This department co-operates with the salesmen in solving the many problems of cooking that come up and also answers the many questions in cooking that are constantly

received through the daily correspondence.

Hardware Special to Run From Chicago to Atlantic City

The hardware special from Chicago to Atlantic City by way of the Pennsylvania Railroad to the fall meeting of the hardware associations has become quite an institution, and the Pennsylvania Railroad has made arrangements for the operation of another hardware special to the Thirty-second Annual Convention of the National Hardware Association and American Hardware Manufacturers' Association at Atlantic City, October 18, 1926.

The hardware special will leave Chicago, Union Station, at 1:00 p. m. Central Standard time, Sunday, October 17, arriving at Atlantic City at 9:30 a. m. Eastern Standard time, Monday, October 18, in ample time for the opening session of the convention. The train will be composed of the latest type of all-steel Pullman sleepers, dining cars, club car and compartment observation car. Special menus will be provided in the dining cars.

Mr. J. A. Oliver, passenger representative, 524 Union Station, Chicago, will accompany the special to Atlantic City to see that everything possible is done to make the trip entirely pleasant and comfortable for members using our service and to assist those desiring to make reservations returning to Chicago and the West. At an early date circulars will be published giving further details in connection with the hardware special.



National Hardware Association convention, Atlantic City, New Jersey, October 19, 20, 21, 22; headquarters, Ambassador Hotel; James T. Fernley, secretary-treasurer, Philadelphia.

American Hardware Manufacturers Association convention, Atlantic City, New Jersey, October 19, 20, 21, 22, 1926; headquarters, Ambassador Hotel; Charles F. Rockwell, 342 Madison Avenue, New York, secretary-treasurer.

Metal Branch National Hardware Association fall meeting, Ambassador Hotel, Atlantic City, New Jersey, Thursday, October 21, 1926. W. H. Donlevy, chairman, 1014 Cherry Street, Philadelphia.

American Welding Society, Annual Fall Meeting, Buffalo, New York, November 17, 18 and 19, 1926. Carl D. Miller, secretary, Burke Electric Company, 508 Morgan Building, Buffalo.

National Warm Air Heating and Ventilating Association mid-year meeting, Urbana, Illinois, December 1 and 2, 1926, Urbana-Lincoln Hotel. Allen W. Williams, secretary, 174 East Long Street, Columbus, Ohio.

Texas Hardware & Implement Association Convention, Dallas, Texas, January 18 to 20, 1927. Dan Scoats, P. O. Box H, College Station, Texas, secretary.

Kentucky Hardware and Implement Association convention and exhibition, Jefferson County Armory, Louisville, Kentucky, February 1 to 4, 1927. J. M. Stone, 200 Republic Building, Louisville, Kentucky, secretary and treasurer.

Michigan Retail Hardware Convention and Exhibition, Grand Rapids, Michigan, February 8, 9, 10, 11, 1927. Arthur J. Scott, Secretary, Marine City, Michigan. K. S. Judson, 248 Morris Avenue, Grand Rapids, Michigan, Exhibit Manager.

Pennsylvania and Atlantic Seaboard Hardware Association, Philadelphia Commercial Museum, February 15, 16, 17 and 18, 1927. Sharon E. Jones, Secretary-Treasurer, Wesley Building, Philadelphia, Pennsylvania.

Illinois Retail Hardware Association convention and exhibit, Hotel Sherman, Chicago, February 15, 16, 17, 1927. Leon D. Nish, 14 North Spring Street, Elgin, Illinois, secretary.

New England Hardware Dealers' Convention and Exhibition, Mechanics' Building, Boston, Massachusetts, February 22, 23 and 24, 1927. George A. Fiel, Secretary, 80 Federal Street, Boston.

Michigan Sheet Metal and Roofing Contractors' Association, Pantlind Hotel, Grand Rapids, March 1, 2 and 3, 1927. Frank E. Ederle, Secretary, 1121 Franklin Street, S. E., Grand Rapids.

Texas Sheet Metal Contractors' Association, Hotel Adolphus, Dallas, Texas, April 24 and 25. Harry Stanyer, Secretary-Treasurer, 2422 Alamo Street, Dallas.

National Association of Sheet Metal Contractors, Adolphus Hotel, Dallas, Texas, April 26, 27, 28 and 29, 1927. W. C. Markle, Secretary, 850 West North Avenue, Pittsburgh, Pennsylvania.

Retail Hardware Doings

Ohio.

Henry Beach has traded his interest in the Hancock Hardware Company's store at Jenera to Edward Marquart for a 50-acre farm.

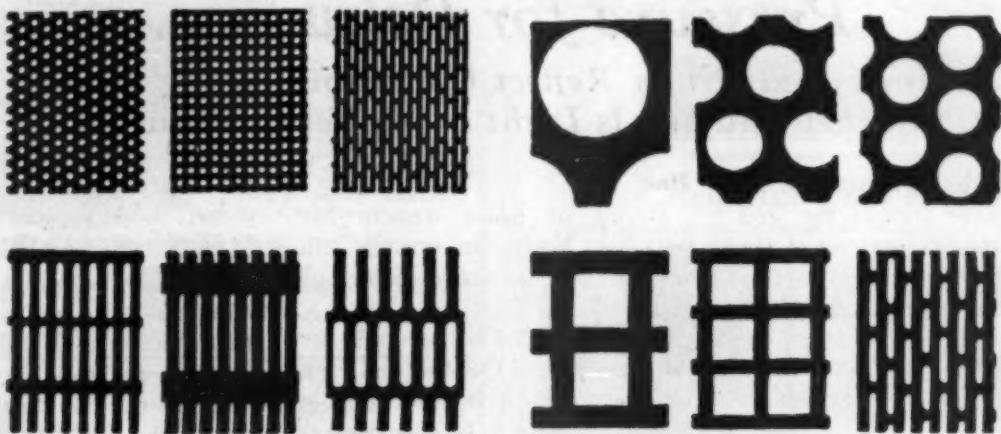
South Dakota.

J. Frank Smith of Sioux Falls has purchased the interests of S. A. Reith and George C. Secrest in the Smith Hardware Company.

Texas

A. L. Schmid Hardware Company at San Antonio has changed its name to Schmid Raymond Company.

PERFORATED METALS



All Sizes and Shapes of Holes in all Kinds and Thicknesses of Metal.
Punched Metal Grilles, Register Faces, Ventilators, etc.

Guard Material for Machines and Belts. We supply a complete line of Accessories
Screens for Grain, Minerals or anything to be screened.

Perforated Tin and Brass always in stock

THE HARRINGTON & KING PERFORATING CO.

5649 FILLMORE STREET, CHICAGO, ILLINOIS, U. S. A.

New York Office: 114 Liberty Street

EVERYTHING USED IN
SHEET METAL WORK

*A Complete Stock Insures
Prompt Shipment*

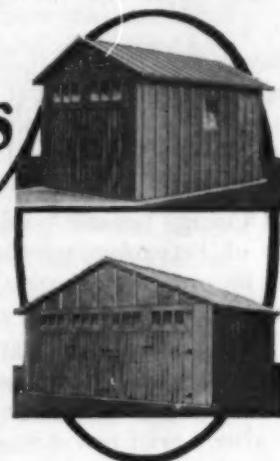
In our warehouse you will find one of the most complete stocks in the country. Not only complete as to quantity but selected by men who have had many years of experience.

There are 12 men in our employ who have been with us a total of 261 years—an average of 22 years per man. It is the knowledge resulting from this experience that we offer you in Osborn Service.

The J. M. & L. A. OSBORN CO.
CLEVELAND
Buffalo Warehouse, 64-68 Rapin Street

BIG Profits Here

THESE Buckeye Steel Garages are making big money for sheet metal men. They're popular in every section of the country. One Philadelphia man sold 96 last year. One in Albany, N. Y., sold 81.



No Investment Required

YOU have the same opportunities. You can sell just as many—perhaps more. For the sheet metal man is the logical dealer for steel garages. And no investment is required. You show your trade only blue prints, photographs and samples of material. We ship the garages to you. You install them and make a double profit—one on the garage and another on the installation.

You can't afford to pass up this chance to "cash in" on the big demand for Buckeye Steel Garages. Get all the facts about this big opportunity by writing today to

THE THOMAS & ARMSTRONG CO.
Dept. M. W. London, Ohio
Makers of Armstrong Radiator Shields

BUCKEYE GARAGES

Last Quarter in Steel Industry Starts Favorably—Mills Under Constant Pressure for Deliveries.

Improved Prices Reflect Undertone of Pig Iron Market—Buying Is Light in Nonferrous Market.

NINE months of remarkable demand have brought the steel industry to the final quarter of the year without perceptible diminution of stability or prospects. If there is good basis for some recent reports of less sanguine expectations in the industry, it is difficult to locate it.

Consumption is keeping on a high plane which in the absence of any considerable stocks, generally, is compelling current ordering in steadily large volume.

The mills under constant pressure for deliveries are keeping production within recent high limits.

Producers exhibit every confidence that the final three months will round out a new high record of steel output for the complete year.

Buyers have been active in specifying out their third quarter obligations and the mills will carry little tonnage past October 1. This has been well marked in steel bars.

At Chicago bar specifications for most of September exceeded August by over 40 per cent and at Pittsburgh by 10 to 25 per cent.

Copper sold actively at 14.25 cents Connecticut about a week ago, but the movement was short-lived and after a brief period in which it appeared that the price would become firmer, it slipped back to this level.

In the Midwest some business was done about 14.45 cents delivered, but this price also gave way.

Users generally appear to be determined to wait until the last minute to buy, and the price situation here and abroad has encouraged their attitude, but on the other hand producers generally are not pushing the market.

Zinc

Buying of prime western has been light lately, but smelters still are busy on the active market of midmonth.

Not much metal has been sold for shipment beyond October, and even for that month it is believed more buying will have to be done.

Smelters appear to be able generally to wait for buyers, though from time to time tonnages appear that are offered a little under the market for quick-turnover.

When these tonnages are taken up the market again becomes firmer, so that demand and supply evidently are well balanced, as the market has remained between 7.25 cents and 7.50 cents East St. Louis for a long time.

High grade metal is well booked at 9.00 cents.

Lead

Outside of a fair inquiry for prompt shipment market seems to be very quiet with sellers at 8.42½ cents f. o. b. St. Louis basis for prompt shipment and 8.40 cents for November and December delivery.

American Smelting & Refining Company's price remains unchanged at 8.75 cents New York.

Solder

Chicago warehouse prices on solder are as follows: Warranted 50-50, \$43.75; commercial 45-55, \$40.75, and plumbers', \$37.75, all per 100 pounds.

Old Metals

Wholesale quotations in the Chicago district, which should be considered as nominal, are as follows: Old steel axles, \$17.50 to \$18.00; old iron axles, \$23.50 to \$24.00; steel springs, \$17.00 to \$17.50; No. 1 wrought iron, \$13.25 to \$13.75; No. 1 cast, \$16.00 to \$16.50, all per net tons. Prices for non-ferrous

metals are quoted as follows, per pound: Light copper, 9 cents; zinc, 5 cents, and cast aluminum, 19 cents.

Pig Iron

An almost total lack of inquiry for pig iron two days before the beginning of the fourth quarter is noteworthy, and is explained by the fact large buyers in this district closed for the entire last half several months ago. Some quiet activity is observed, customers extending contracts with regular sources without issuing inquiries.

Single carload sales are noted at \$19.

One buyer of bessemer which recently contracted for a carload per day during the fourth quarter at \$19 f. o. b. Pennsylvania furnace having the same freight rate to Pittsburgh as from the valley, wanted to increase the contract to involve two carloads daily.

Basic iron is more difficult to locate at \$17.50, more makers quoting a minimum of \$18. Nothing below \$18, base valley, now as available on foundry and malleable.

No inquiries for malleable are pending.

At Chicago several fairly large tonnages of northern pig iron have been sold for first quarter, and an inquiry is out for 4,000 to 5,000 tons for first quarter for a southern Michigan melter.

The present quotation of \$21, Chicago furnace, apparently is regarded by some buyers as a good basis upon which to negotiate for orders for early next year.

Pig iron prices at Birmingham have been marked down 50 cents to \$1 by furnace interests here, new prices now being quoted for fourth quarter being \$20 to \$20.50, base, Birmingham.

EARLE'S VENTILATOR IMPROVED REVOLVING

It runs in a self-lubricating bearing that is not affected by heat or cold. It is noiseless and produces an upward current of air. No down draft. It will satisfy and give you a good profit.

BERGER BROS. CO.
229 to 237 ARCH STREET
WAREROOMS AND FACTORY, 100 TO 114 BREAD STREET
PHILADELPHIA, PA.
Manufacturers of "Quaker City" line of Mitors, Ends, Caps and Outlets

ÆOLUS FOR HOMES

The home should be properly ventilated—few of them are. Here is a sales opportunity often overlooked by the average Sheet Metal Worker, but one which offers a lucrative business to those who take advantage of it.

Æolus-Dickinson Co.
Vent Makers Since 1888
3333-53 South Artesian Avenue
CHICAGO
Phone: Lafayette 1862-1863

SPECIFY ÆOLUS VENTILATORS

The NEW IMPROVED "STANDARD" Rotable Ventilator

Patents pending

This favorite cone-shaped ventilator is now improved in several important points. The weight of the ventilator body is now carried on a concave thrust bearing nested in the apex of the conical body. This bearing turns upon the pivot point of the stationary center spindle. The bronze Guide Bushings are now made of non-corrosive bronze which minimizes friction and any tendency to screech when body is rotating. There are other new features. Write today for new catalog and price list.

STANDARD VENTILATOR CO., LEWISBURG, PA.

CHICAGO STEEL SLITTING SHEAR

LIGHT—POWERFUL DURABLE

Capacity 10 gauge sheets
Any Length or Width
Flat Bars 3/16x2'
Weight 22 pounds
Price \$12.50 Net
F. O. B. Chicago

Made of pressed steel and equipped with hold-down. Blades of highest grade crucible steel. Most indispensable high grade shears made. Equal to other shears selling at over twice the price. **ORDER YOURS TODAY.**

DREIS & KRUMP MFG. CO., 7404 Leomis St., Chicago

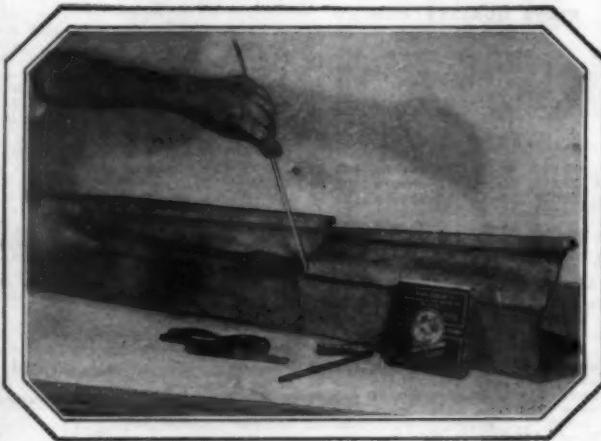
KESTER SOLDER

Self-Fluxing



(Underwriters' Laboratories Inspected)

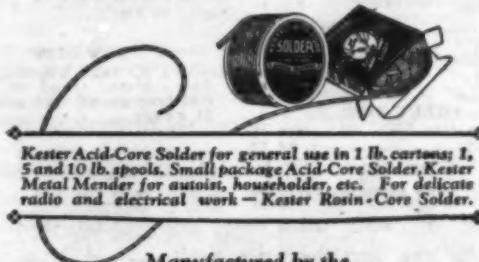
"Requires Only Heat"



For Dirty Work

PARTS to be soldered should be clean—yes, but how often are they? In outdoor sheet-metal work dirty jobs are often met. Usually this work must stand up well and it is vital to have a well soldered joint.

On a job like that, Kester is in its glory. Just apply heat and see how the scientific flux flows out, just before the solder melts. An ideal combination—this scientific flux, and bright virgin tin and lead solder. The only result can be neat and substantial work. And at that, in a fraction of the time consumed by using common solder.



Kester Acid-Core Solder for general use in 1 lb. cartons; 1, 5 and 10 lb. spools. Small package Acid-Core Solder, Kester Metal Mender for autoist, householder, etc. For delicate radio and electrical work—Kester Rosin-Core Solder.

Manufactured by the
CHICAGO SOLDER COMPANY
4243 Wrightwood Ave.
CHICAGO, U. S. A.

Chicago Warehouse Metal and Furnace Supply Prices

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing Western Hardware and Metal prices corrected weekly.

METALS

PIG IRON

Chicago Fdy., No. 2.....	\$21.00
Southern Fdy., No. 2.....	26.01
Lake Superior Charcoal.....	29.04
Malleable.....	31.00

FIRST QUALITY BRIGHT TIN PLATES

IC 20x28 112 sheets.....	\$25.10
IX 20x28.....	29.00
XXX 20x28 56 sheets.....	16.20
XXXX 20x28.....	17.55
XXXXX 20x28.....	18.95

TERNE PLATES

Per Box	
IC 20x28, 40-lb. 112 sheets.....	\$27.90
IX 20x28, 40-lb. 112 sheets.....	30.90
IC 20x28, 25-lb. 112 sheets.....	32.20
IX 20x28, 25-lb. 112 sheets.....	35.20
IC 20x28, 25-lb. 112 sheets.....	36.20
IV 20x28, 20-lb. 112 sheets.....	23.00
IC 20x28, 15-lb. 112 sheets.....	16.55

"ARMCO" INGOT IRON PLATES	
No. 8 ga. up to and including 4 in.—100 lbs.....	\$4.55

COKE PLATES

Cokes, 80 lbs., base, 20x28.....	\$12.60
Cokes, 90 lbs., base, 20x28.....	12.80
Cokes, 100 lbs., base, 20x28.....	13.00
Cokes, 107 lbs., base, 1c 20x28.....	13.30
Cokes, 136 lbs., base, IX 20x28.....	15.70
Cokes, 156 lbs., base, 66 sheets.....	8.70
Cokes, 176 lbs., base, 66 sheets.....	9.55
Cokes, 196 lbs., base, 66 sheets.....	10.40

BBLUE ANNEALED SHEETS

Base 10 ga.....per 100 lbs.	\$2.50
"Armco" 10 ga. per 100 lbs.	4.00

ONE PASS COLD ROLLED BLACK

No. 18-20.....per 100 lbs.	\$3.75
No. 22.....per 100 lbs.	3.90
No. 24.....per 100 lbs.	3.95
No. 26.....per 100 lbs.	4.05
No. 27.....per 100 lbs.	4.10
No. 28.....per 100 lbs.	4.20
No. 29.....per 100 lbs.	4.35
No. 30.....per 100 lbs.	4.45

"ARMCO" GALVANIZED

"Armco" 24.....per 100 lbs.	\$6.25
-----------------------------	--------

GALVANIZED

No. 16.....per 100 lbs.	4.30
No. 18.....per 100 lbs.	4.45
No. 20.....per 100 lbs.	4.60
No. 22.....per 100 lbs.	4.65
No. 24.....per 100 lbs.	4.80
No. 26.....per 100 lbs.	5.05
No. 27.....per 100 lbs.	5.15
No. 28.....per 100 lbs.	5.30
No. 30.....per 100 lbs.	5.70

BAR SOLDER

Warranted 56-50.....per 100 lbs.	43.75
Commercial 45-55.....per 100 lbs.	40.75

ZINC

In Slabs.....	\$8.50
Cash Lots (600 lbs.).....	\$13.75

Sheet Lots.....

14.75

BRASS

Sheets, Chicago base.....	19% c
Tubing, brazed base.....	22% c
Mill base.....	19% c
Wire, base.....	19% c
Rods, base.....	17% c

COPPER

Sheets, Chicago base.....	22c
Mill base.....	22c
Tubing, seamless base.....	26c
Wire, No. 9 B & S Ga.....	19% c
Wire, No. 10, B & S Ga.....	19% c
Wire, No. 11 B & S Ga.....	19% c
Wire, No. 8 B & S Ga. and heavier.....	19% c

HARDWARE, SHEET METAL SUPPLIES, WARM AIR FURNACE FITTINGS AND ACCESSORIES.

LEAD

American Pig.....	\$9.45
Bar.....	10.45

ASBESTOS

Paper up to 1/16.....	6c per lb.
Roll board.....	6 1/4c per lb.
Mill board 3/32 to 1/4.....	6c per lb.
Corrugated Paper (256 sq. ft. to roll).....	\$6.00 per roll

BRUSHES

Hot Air Pipe Cleaning Bristle, with handle, each.	\$0.85
Flue Cleaning Steel only, each.....	1.25

BURRS

Coppers Burrs only.....	40%
-------------------------	-----

CEMENT, FURNACE

American Seal, 5-lb. cans, net	2.40
American Seal, 10-lb. cans, net	3.00
American Seal, 25-lb. cans, net	2.00
Pecora.....per 100 lbs.	7.51

CHIMNEY TOPS

Iwan's Complete Rev. & Vent.....	30%
Iwan's Iron Mountain only.....	35%
Standard.....	30 to 40%

CLINKER TONGS

Front Rank, each.....	40.75
Per doz.....	8.40

CLIPS

Damper	
Acme, with tail pieces, per doz.....	\$1.25
Non Rivet tail pieces, per doz.....	25
CLIPPERS—Soldering Pointed Roofing	
3 lb. and heavier.....per lb.	40c
2 1/2 lb.per lb.	45c
2 lb.per lb.	48c
1 1/2 lb.per lb.	55c
1 lb.per lb.	60c

CORNICE BRAKES

Chicago Steel Bending Nos. 1 to 6B.....	Net
--	-----

CUT-OFFS

Kuehn's Korrekt Kutoffs: Galv., plain, round or cor. rd. standard gauge.....	40%
26 gauge.....	30%

DAMPERS

"Yankee" Hot Air	
7 inch, each 20c, doz.....	\$1.75
8 inch, each 25c, doz.....	2.40
9 inch, each 30c, doz.....	2.75
10 inch, each 32c, doz.....	3.00
Smoke Pipe	
7 inch, each.....	\$0.35
8 inch, each.....	40
9 inch, each.....	50
10 inch, each.....	60
12 inch, each.....	90
Reversible Check	
8 inch, each.....	\$1.50
9 inch, each.....	1.70

DIGGERS

Post Hole	
Iwan's Split Handle (Eureka)	
4-ft. Handle.....per doz.	\$14.00
7-ft. Handle.....per doz.	36.00
Iwan's Hercules pattern, per doz.....	14.00

EAVES TROUGH

Galv. Crimpedge, crated..	.75 & 5%
---------------------------	----------

ELBOWS

Conductor Pipe Milcor.

Galv., plain or corrugated, round flat Crimp.	
28 Gauge.....	50%
26 Gauge.....	45%
24 Gauge.....	40%

Square Corrugated

No. 28 Gauge.....	50%
26 Gauge.....	45%

DUCTOR PIPE

Portico Elbows	
Standard Gauge Conductor Pipe, plain or corrugated.	
Not nested.....	70 & 5%
nested solid.....	70 & 5%

SQUARE CORRUGATED

No. 28 Gauge.....	50%
26 Gauge.....	45%

ELBOWS—STOVE PIPE

<table border



This Is the Fire Pot You Need

WHY?

B It always burns with a blue flame which produces THE HEAT.
E A 2½ pound copper will heat and melt solder in TWO MINUTES.
C The pot will generate and operate outdoors in ANY KIND OF WEATHER.
A It will heat irons as fast as they are cooled. No time wasted.
U Less than a gallon of gasoline is used in a day.
S It is smokeless and odorless while in operation.
E It can be turned down low when not in use.

Order yours now. Only \$11.00 f. o. b. factory. Two per cent discount when cash accompanies the order.

DOUBLE BLAST MFG. CO., Inc.
Commonwealth Ave. North Chicago, Ill.

No. 25 Double Blast
Gasoline Fire Pot



Just as Good as a "Torrid" may be used as a reason for not supplying a genuine "Torrid" but it proves genuine "Torrid's" superiority.

GEO. W. DIENER MFG. CO., CHICAGO
Makers of fine Blow Torches and Fire Pots.

CHICAGO STEEL CORNICE BRAKES STANDARD OF THE WORLD



THE BEST BRAKE FOR ALL PURPOSE : Most Durable, Easiest Operated, Low in Price; Made in All Lengths and to Bend All Gauges of Metal. Over 23,000 in use.

WRITE FOR PARTICULARS
DREIS & KRUMP MFG. CO., 7404 Loomis Street, CHICAGO

WE have a new Book Catalog—just off the press—write for your copy today.

AMERICAN ARTISAN



"The Power Fan's
AREX—Only Rival!"
Original Siphonage Ventilator
200,000 perfect installations!

The Arex-Austor holds all records for efficiency and performance—conceded as the only scientific substitute for fans, blowers and other apparatus.

Engineering Service Free
Prompt Shipment from Stock
Exclusive Ventilator Mfrs.

AREX
COMPANY
1881 Conway Bldg., Chicago

The Finest Collection of New and Handsome Designs in

ART METAL CEILINGS and SIDEWALLS

is at your disposal in selling metal ceilings if you offer the new Friedley-Voshardt complete line.

Our new book of 108 pages catalogs in a handy manner these up-to-date patterns and a copy of this book is yours for the asking.

We also specialize in made to order designs.
Write for a copy of our catalog today.

Also manufacturers of Architectural Sheet Metal Ornaments and sheet metal statuary in ZINC-COPPER-LEAD—write for catalog giving complete details.

Friedley-Voshardt Co.

Office: 733-737 S. Halsted St. Factory: 761-771 Mather St.
CHICAGO, ILLINOIS

VESUVIUS BLOW TORCHES



In pint or quart sizes
With quickly removable soldering iron hooks.

Vesuvius Blow Torches are made of brass or non-corrosive oxydized terne plate. The latter is particularly recommended for hard usage.

Write for prices and illustrated circular today

QUICK MEAL STOVE COMPANY
Div. American Stove Company
825 Chouteau Ave.

St. Louis, Mo.

50-INCH FORMING ROLL

This Forming Roll is built in all standard sizes, with our Patented Opening Device by means of which it is opened and closed in a few seconds.

We build a complete line of Shears and Punches, all sizes, for hand or belt power.

Write for Catalog "R"
BERTSCH & CO., Cambridge City, Ind.



ECONOMY VENTILATOR

Designed to meet the demand for a ventilator at lowest possible cost, yet capable of solving any ordinary ventilating problem. IT PAYS TO STOCK THEM!

Write for quantity discount.



Inexpensive!

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NETTING, POULTRY	
Galvanized before weaving	57½-5%
Galvanized after weaving	53½-5%
PASTE	
Asbestos Dry Paste:	
200-lb. barrel	\$16 00
100-lb. barrel	8 75
25-lb. pail	50
10-lb. bag	10
5-lb. bag	60
2½-lb. cartons	35
PIPE	
Conductor	
Cat. Rd., Plain Rd. or Sq.	
"Interlock" Galvanized	
Crated and nested (all gauges)	75-2½%
Crated and not nested (all gauges)	70-15%
"Milcor" "Titlelock" Uniform Blue Stove	
28 gauge, 5 inch U. C. nested	11 00
28 gauge, 6 inch U. C. nested	12 00
28 gauge, 7 inch U. C. nested	14 00
30 gauge, 5 inch U. C. nested	10 00
30 gauge, 6 inch U. C. nested	10 50
30 gauge, 7 inch U. C. nested	13 00
T-Joint Made up	
6-inch, 28 ga.	per 100 \$2 50
Furnace Pipe	
Double Wall Pipe and Pipe Fittings	40-10%
Single Wall Pipe, Round	
Iron Pipe Galvanized	40-10%
Galvanized and Black Fittings	40-10%
Milcor Galvanized Pipe and Fittings	40-10%
Lead	
Per 100 lbs.	\$12 50
POKERS, STOVE	
Wr't Steel, str't or bent	
.....per doz.	\$0 75
Nickel Plated, coil handles	
.....per doz.	1 10
POKERS, FURNACE	
Each	10 50
PULLEYS	
Furnace Tackle	per doz. \$0 90
.....per gross	6 00
Furnace Screw (encased)per doz.
.....per doz.	75
VENTILATING REGISTER	
Per gross	9 00
Small, per pair	30
Large, per pair	50
PUTTY	
Commercial Putty, 100-lb. kits	33 40
QUADRANTS	
Malleable Iron Damper	10%
REDUCERS—Oval Stove Pipe	
Per doz.	\$2 00
7-6, 1 doz. in carton	
BASEBOARD REGISTERS	
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Baseboard	40%
In lots less than 50	33 40%
Adjustable Ceiling Ventilators	40%
Register Faces—Cast and Steel	
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Large Register Faces—Cast, 14x14 to 33x42	50%
Large Register Faces—Steel, 14x14 to 33x42	65%
In lots less than 50	60%
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Milcor	
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Galv. Plain Ridge Roll, crated	75-10%
Globe Finials for Ridge Roll	50%
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Light talc surfaced	1 20
Red Rosin Sheetng, per ton	57 00
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No. 10, ¾x1/16, per gross	63
No. 14, ¾x¾, per gross	89
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Mitre	Net
TRY	
Try	Net
TRY AND BEVEL	
Try and Bevel	Net
TRY AND MITRE	
Try and Mitre	Net
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For's	per doz. \$6 00
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Winterbottom's	10%
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Galvanized barb wire, per 100 lbs.	3 90
Wire cloth—Black painted, 12-mesh, per 100 sq. ft.	1 75
Cattie Wire—galvanized catch weight spool, per 100 lbs.	3 85
Galvanized Hog Wire, 36 rod spool, per spool	3 34
Galvanized plain wire, No. 9, per 100 lbs.	3 50
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No. 110, Brighton	per doz. 48 50
No. 750, Guarantee	per doz. 55 50
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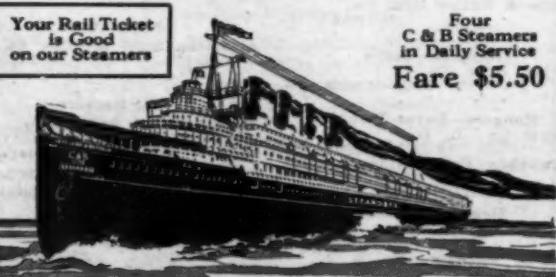
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For Sale—Bargain. A good tin and sheet metal, furnace, plumbing and radiator shop. Robinson brake, power emery wheel, torch and test tank; a good set of plumbing and tinner's tools; good assortment of tinware and other salable goods. The place has grown so that I haven't the capital to run it and key it up. You could not start a business like this for \$1,000. Have new National cash register. First offer of \$700 takes it. You can make that in one winter. Address Lee O. Bailey, Parkston, South Dakota. 13-3t

For Sale—Sheet metal and furnace shop. Fully equipped. Established 23 years. Busy all year around. Do \$10,000 to \$12,000 per year. Good location. I have accumulated a fortune and have reached the age where I do not care for business. This is a splendid chance for someone who understands the business. \$2,000 takes it. I can furnish all the references required, banks or supply houses. Address X-55, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 10-3t

For Sale—Overstocked on brand new well-known high grade furnaces which I bought at an administrator's sale. Will sell at the following prices, as long as stock lasts. These prices are about 25 per cent below the manufacturer's net price. No. 240, \$75 each; No. 248, \$110 each; No. 363, \$64 each; No. 863, \$70 each; No. 372, \$35 each; f. o. b. Hammond, Indiana. Write H. M. Maginot Sales Co., 174 Fayette Street, Hammond, Indiana. 10-3t

For Sale—A first-class up-to-date, sheet metal and furnace business. Established nine years. Good reputation. Excellent location. This business is completely equipped and stocked. A wonderful opportunity for the right party. A good business the year around. Selling on account of ill health. Address X-65, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 11-3t

For Sale—Sheet metal business established 10 years in city of 40,000 near Chicago. Inventory value of stock and tools, \$6,000, but can be bought at a very favorable figure. Must be sold at once. Act now. Address X-69, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 11-3t

For Sale—Well established plumbing and tinning shop in good town of 1500. Large lot and building, well located, good equipment, plenty of work. Will sell real estate, stock and tools for \$2,500. Good reason for selling. Address C. W. Filby, Jefferson, Ashtabula Co., Ohio. 12-3t

For Sale—Fully equipped plumbing, heating and tin shop. Reasons for selling on account of husband's death. Will sell at a real bargain. Address Mrs. D. E. Schrader, Charles City, Iowa. 9-4t

BUSINESS CHANCES

For Sale—In Chicago, tin shop, general sheet metal, furnace and roofing. An established business of years' standing, fully equipped. Ideal location, plenty of work all the year around. Will stand the closest investigation. Poor health forces owner to sell. Address X-37, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 12-3t

For Sale—Sheet metal and machine shop located in central Iowa city of 17,000 population. Stock and tools for less than half of invoice. Other business interests forces owner to sell. Address X-64, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 13-3t

HELP WANTED

Wanted—A married man not over 45 years of age with family, that would like steady in and outside work in a first class shop. Must be a good roofer and also well able to make and erect any style Skylight, Cornice, Ventilator or Blow Pipe job. Wages \$6.50 per day of 9 hours. Address P. O. Box 123, North Emporia, Va. 11-3t

Wanted—Shop man for live hardware store; must have considerable sheet metal and furnace experience. Knowledge of windmill, pump and engine repairing desirable. A fine opportunity for right man. Illinois town of 4,000 in rich farming district. Address X-63, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Ill. 13-3t

Wanted—At once, experienced tinner who can install furnaces, put up eavestrough and general repairing. Steady work. State wages wanted in first letter. Address Wendt & Teichler, 318-320 River Street, Dundee, Illinois. (Located in the Fox River Valley.) 11-3t

Wanted—At once, an all-around, first-class tinner and furnace man. Steady work at \$35.00 a week. In a town of 2,000 population in northern Illinois. Address X-66, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 14-3t

Wanted—At once, a man who can do furnace installing, eaves spouting, also plumbing. In town of 2,000. State experience, age, married or single, and wages expected in your reply. Address A. C. Buzzard, Holly, Michigan. 12-3t

Wanted—High class salesman and outside foreman for roofing and sheet metal business in South; also two good sheet metal workers. Address X-62, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 13-3t

Wanted—At once, experienced tinner who can install furnaces, put up eavestrough and do general repairing in a college town of 2,000 inhabitants. Steady job. State wages in replying. Curfman & Son, Tarkio, Missouri. 13-3t

Wanted—Good tinner for general job work. Capable of measuring up, making up and installing work. Address Ben Callahan, 200 North Adolph Ave., Akron, Ohio. 12-3t

Wanted—At once. Furnace installer and sheet metal worker. State age and wages wanted in first letter. Address C. F. Tolg & Son, 238 Broadway, Waukesha, Wisconsin. 13-3t

Wanted—At once, experienced tinner and plumber; fifty cents per hour. Town of 2,000. Address Bridges and Bristow, Bedford, Iowa. 14-3t

SITUATION WANTED

Situation Wanted—Conscientious married man 35 years of age, with pleasing personality, desires a position as salesman to represent a reliable company in Wisconsin. Have had 17 years' experience in manufacturing, installing and selling at wholesale and retail. Open for position after October 15th. Address X-68, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 14-3t

SITUATION WANTED

Situation Wanted—As traveling salesman for some good furnace company. Have had road experience; also been in the installation game for a number of years. Am a good estimator and can furnish good references. Will be ready Jan. 1, 1927, to start work, as I am now engaged until December. Address Leonard Snowden, 634 Beverly Ave., Ma-comb, Illinois. 13-3t

Situation Wanted—By first-class plumber, hot water and steamfitter with full set of tools. A position where he can work himself into an interest in the business. Can estimate all of the above work. I would also consider running shop with commission basis. Address X-58, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 11-3t

Situation Wanted—By a sheet metal worker, who has 25 years' experience. Non-union man, wishes to hear from a reliable concern, along the western coast states. Have handled in and outside work, pattern cutting and layout, general sheet metal work light and heavy. Address C. H. 433 Wall St., Los Angeles, California. 11-3t

Situation Wanted—By married man, all round mechanic. Can figure and estimate work or sell, also keep books. Have had experience in hardware line. Would like working interest. Southern Michigan preferred. Address X-54, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 10-3t

Situation Wanted—By first-class tinner and furnace man in northern Iowa or southern Minnesota county seat. At liberty about November 1st. Could take over shop on wages and commission. Address X-67, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 14-3t

Situation Wanted—By A-1 mechanic on sheet metal and furnace work. Can also do plumbing. Have had 16 years' experience. Can handle shop and sell. Nothing but a steady job considered. Also prefer southern Michigan. Address X-61, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 13-3t

Situation Wanted—First class tinner, plumber and furnace man would prefer a hardware store. Can do anything that comes in any shop. Would like a year around position. State wages in first letter. Address Box 436, Mandan, North Dakota. 10-3t

Situation Wanted—Young man learning trade would like to get in shop doing inside and outside work year around. Address X-57, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 11-3t

Situation Wanted—By first-class sheet metal worker, tinner and plumber, warm air furnace installer and hot water heating. Address X-60, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 13-3t

Situation Wanted—Plumber and steamfitter, exclusively, wants steady work, married. Will go anywhere. Address John L. Cornford, General Delivery, Bellvidere, Illinois. 10-3t

For Sale—1 Brake, 1 Squaring Shear Mandrel, 1 Roll, 1 Groover, 1 Pipe Folder, 1 Crimper, 1 Wiring Machine, 1 Furnace Bench Plate and Stake, 1 Beading Machine, 2 Turning Machines, 1 Burring Machine, 1 No. 1 Whitney Punch. Will sell one or all. Write for price on what you want. Address Jacob J. Reimer, Meade, Kansas. 11-3t

For Sale—One Dreis & Krump Chicago steel brake No. 163, power drive, six foot twelve gauge, heavy duty, same as new, only used one hour in experimental work and is in perfect condition. Accept \$300 cash for prompt sale. F. o. b. Camden, Indiana. A. B. Cripe. 13-3t

I am in the market for a 10 foot brake. What have you to offer? When writing mention price. E. Gissinger, Wauwau-tosa, Wisconsin. 11-3t

BOOKS

The Ventilation Handbook, by Charles L. Hubbard. A practical book designed to cover the principles and practice of ventilation as applied to furnace heating; ducts, flues and dampers for gravity heating; fans and fan work for ventilation and hot blast heating by means of a comprehensive series of questions, answers and very plain descriptions easy to understand. Price \$2.00. Order from Book Dept., AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

Sheet Metal Duct Construction, by Neubecker—A treatise on the construction and erection of heating and ventilating ducts, including the cutting and forming of the metal, the laying out of the elbows, etc. A practical expert wrote this book and you'll find that it covers the subject thoroughly. By William Neubecker. Bound in cloth, 194 pages, 217 illustrations. Size $5\frac{1}{2} \times 8\frac{1}{4}$ inches. Price \$2.00. Order from Book Dept., AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

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An old established firm in the heating and plumbing business, with ample financial resources in middle western city of 150,000 population, has opportunity for experienced furnace man capable of taking complete charge of furnace operation. Must be able to show a record of producing business. Drawing account per cent on sales and bonus on net profit. Address L-82, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

14-1t.

SITUATION WANTED

Young man with 17 years experience in the manufacturing wholesale and retail sales of furnaces, desires position with a reliable furnace company. Address L-80, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

12-1t.

FURNACE MANUFACTURERS!

Situation wanted by a real furnace man who knows the furnace manufacturing business from A to Z. Have worked on both sides of the counter in the furnace business—inside, directing the policies of the company, and outside, doing bare-handed selling.

I want to get back into the furnace and know that I can produce real business for a manufacturer of a good furnace.

Let me hear from you. Address L-78, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

10-4t



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SITUATION WANTED

Experienced road man would like to line up with a good house selling furnaces, stoves or heavy hardware. Address L-81, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

13-3t

FURNACE SALESMEN

Experienced retail furnace salesmen and furnace installers; splendid proposition for resourceful, energetic men of good character and habits; excellent opportunity to get established in business with a specialty that insures attractive profits; young men, financially responsible preferred, although good moral risks will be interviewed; only those with successful records need apply. Address L-79, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

11-3t

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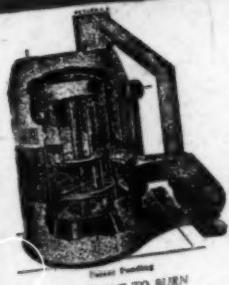
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He has called on the trade and sold warm air heaters for many years—yet he's an up-to-date salesman who works every week of the year—rain or shine.

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